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# Tariff Changes Proposed by Senate Committee

## Casein Is Increased from 2½ to 3½ Cents Per Pound, China Clay Is Decreased $1.00 Per Ton and Wire Woven Fabrics Are Decreased 10 Per Cent by the Finance Committee—Number of Changes Are Made in the Paper Schedule But in Most Instances Changes Are in Wording Rather Than in Rates

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., August 21, 1929.—A number of changes have been made in the paper schedule of the tariff bill by the Senate Finance Committee, but in most instances they are changes in wording rather than in rates.

In addition to the actual paper schedule, the standard news print item remains on the Free List as passed by the House, as do waste bagging, wood pulp, crude paper stock, while the rate on casein was increased from 2½ to 3½ cents per pound by the Senate Committee. Rates on China Clay were decreased $1.00 per ton and wire woven fabrics were decreased 10 per cent by the Committee. Salt Cake remains on the Free List.

### Papers and Books—Schedule 14

In Paragraph 1403 a new proviso is inserted imposing a duty of 30 per cent ad valorem on manufactures of pulp not specially provided for.

Paragraph 1404, relating to papers commercially known as tissue paper, stereotype paper, copying paper, India and Bible paper, carbon paper, bibulous paper and all paper similar to the foregoing, is rewritten. The effect of the changes is to impose duties of 6 cents a pound and 20 per cent ad valorem on such papers, colored or uncolored, or white or printed, when weighing not over six pounds to the ream. The existing and House rates are the same.

In the case of India and Bible paper weighing 10 pounds or more and less than 21½ pounds, the current rate of 4 cents a pound and 15 per cent ad valorem, which the House adopted, is not changed. The only change is that making these rates apply to papers weighing over 21½ pounds instead of 18, as provided by the present law and the House bill.

Paper and pulp wadding and manufactures of such wadding are made dutiable at 6 cents a pound and 15 per cent ad valorem by Paragraph 1404 of the Senate bill.

Uncoated papers, decorated or covered with a design or produced by lithographic process, carry a rate of 4½ cents a pound under the existing law, and if embossed or printed otherwise than lithographically an additional duty of 17 per cent ad valorem.

### New Rates on Metal Coated Paper

The House increased the ad valorem rate in this instance to 18 per cent. The Senate retained the specific rate of 4½ cents a pound and reduced the ad valorem to 10 per cent. On paper wholly or partly covered with metal or solutions and weighing less than fifteen pounds per ream the existing rates are 5 cents a pound and 17 per cent ad valorem; the House rates 5 cents a pound and 20 per cent ad valorem, and the Senate rates 5 cents a pound and 18 per cent ad valorem.

Rates of 5 cents a pound and 10 per cent ad valorem are imposed by the Senate bill on simplex decalcomania paper not printed, instead of the rate of 5 cents a pound prescribed by existing law and the bill as it passed the House.

The language of the paragraph dealing with plain basic paper is changed. A series of graded rates in the present law and the House bill are rearranged in such manner as to provide a rate of 3 cents a pound and 15 per cent ad valorem on plain basic paper for albumenizing, sensitizing or for photographic processes. Albumenized or sensitized paper or paper otherwise surface-coated for photographic purpose is taxed at 3 cents a pound and 20 per cent ad valorem.

### Rate Rises on Decalcomanias

Decalcomanias in ceramic colors, weighing not over 100 pounds per 1,000 sheets on the basis of 20 by 30 inches, carry a rate of 70 cents a pound and 15 per cent ad valorem in the existing law; the specific rate was increased to $1.40 a pound by the House and fixed at $1.25 a pound by the Senate committee.

Decalcomanias weighing over 100 pounds per 1,000 sheets on the basis of 20 by 30 inches in dimensions are taxed by the existing law at 22 cents a pound and 15 per cent ad valorem; the specific rate was 35 cents by the House and was fixed at 30 cents by the Senate.

Hanging paper, not printed, lithographed, dyed or colored, is specifically enumerated in the Senate bill and given a rate of 10 per cent ad valorem; if printed, lithographed, dyed or colored it will carry rates of 1½ cents per pound and 20 per cent ad valorem. Filtering paper is given the existing rates of 5 cents a pound and 15 per cent ad valorem by the Senate bill instead of 30 per cent ad valorem as provided by the House bill.

### Cover Paper at 20 Per Cent

Cover paper, plain, uncoated and unevaporated, taxed by the House at 30 per cent, is made dutiable at 20 per cent ad valorem by the Senate bill.

Schedule 14 of the Senate bill levies a duty of 10 cents a pack and 20 per cent ad valorem on playing cards, the rates of the existing law which were embodied in the tariff bill as it passed the House. The schedule contains a new item in the form of a duty of $3 a thousand on ribbon fly-catchers.

Schedule 14 provides in relation to many articles of paper and pulp that if any country shall forbid or restrict in any way the

(*Continued on page 40*)

# Demand for Paper More Lively in Philadelphia

## Continued Steady Tone of Market Encourages Dealers to Purchase Standard Grades for Autumn Stocking—Fine Paper Market Shows Improvement—Book Paper Moving In Heavy Volume Under Contract Buying—Summer Specialties Continue In Request

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., August 19, 1929.—The local paper trade has again turned towards autumn preparations and the mills report a livelier interest in actual orders and in inquiries for deliveries before the month-end or for early September. The continued steady tone of the paper market has encouraged dealers to interest themselves in the coming Fall stocking as it is believed that prices are more likely to advance than to recede. While many grades of standard papers have been laggards, hot weather paper goods have been moving in heavy volume. Sanitary products have been unusually active. The excellent season enjoyed by dealers in these specialties in the city trade has extended to the seashore resorts.

There has been more liveliness in the fine paper market. Book papers, of course, head the list of active grades, moving in heavy volume under contract buying. Writing papers, school supplies and card boards continue steady. Mills are reported to be operating on from 80 to 90 per cent of capacity in these grades. There has been free campaigning for sales from out of town mills and mill representatives in the local trade are more aggressive in their pleas for orders as they note the revival of interest in the distributive markets.

Kraft mills have been maintaining scheduled prices this summer and now that dealers are convinced that they may buy with confidence in future stability of values the market has again become active. Builders supplies are moving rather sluggishly. Tissues are steady and likewise those grades of glassines and parchments which are adapted for summer consumption in the food industries. Corrugated products and paper boards are not as active as could be desired but price changes are lacking.

Paper stock shows mill activity and wholesalers are moving available supplies of the better grades that are not to be found in any great quantities owing to sparsity of accumulations. It is expected that prices on book, ledger and the better grades of writing papers will advance as the mills turn to preparation for the coming Fall. The cheaper grades are holding steady and an advance is looked for when mill demands increase. There are no accumulations on hand.

### Retail Waste Dealers Meet

Last week the Philadelphia retail waste dealers met at the offices of the William A. Coll Company and took up the matter of broader activities in the matter of collection under special permit of the city authorities so that a threatened shortage in waste paper may be avoided. A new organization, of which William A. Coll is president, is co-operating with wholesalers in the relief of the shortage of paper stock. It has taken up with the city authorities the question of a permit for its members to canvass the city and collect waste paper and old newspapers under direction of its regulated program which confines collections to rules set down by the city. Legal aid has been provided under its charter to members enrolled so that they may have free consultation regarding the city ordinance. There are fifty firms enrolled. Other officers are Vice President Samuel Halpern, Treasurer L. Bornstein, and Secretary Henry Rosenbaum.

### Deerfield Offers New Paper

An entirely new product which has all the properties of glassine paper is being offered to the Philadelphia trade by the Deerfield Paper Company, of Monroe Bridge, Me., as a substitute for the long used transparent product. It is termed "glassite" and has all the properties of the old established product. It is offered at cheaper prices than glassine but does not have the designs nor the attractiveness for wrapping purposes that the latter offer. It is adapted for general use where a popular priced and much used product is needed. The product has been sold here freely throughout the summer after its introduction to the trade under samplers earlier in the season.

### Central Paper Bag Mfg. Co. Speeds Service

Speedy production service in the manufacture of paper bags has been provided by the Central Paper Bag Manufacturing Company, 1732 North Blair street, on its flat and square bags for the trade. The firm has developed its own type of printing machine attached to the bag machinery and is able to produce bags and print them at the same time without regulation of the mechanical units. The machines produce any size of 4-6-11 bags. The printing machines are adjusted to the bag unit so that they eliminate the need of delay in changing cuts for the bags. The plant is equipped to handle volume orders and carload shipments.

### Paramount Increases Bag Production

The Paramount Paper Products Company, 226-230 Callowhill street, is adding to its machinery for the production of a general line of bags. The firm is now making a specialty of coffee bags and will provide for the added printing equipment for several colors in designs and printed matter for these bags. The Paramount company is a subsidiary of the Enterprise Paper Company, 3rd and Callowhill streets, which recently absorbed the Joseph Hall Company, dealers in wrapping papers and specialties.

### Banner Sanitary Supplies Develops Lines

Having established a converting department in conjunction with its printing business, with production confined to sanitary supplies of paper goods, the Banner Sanitary Supplies Company, Taney and Parrish streets, is planning to materially extend this branch of its business. The firm is featuring napkins, towels, tray covers, doilies, glassine bags and kindred products. The Banner Sanitary Supplies Company is to augment these with like products under original printed designs, with firm imprint and crests, and will branch out into the production of allied specialties in similar designs. The firm is a subsidiary of the Pioneer Printing Company, with Elwood Bannon at its head, which has long been identified with the printing industry.

### Aatel and Jones Expands

Having recently removed to its new building at 1314 South Howard street, the Aatell and Jones Company is now equipped with additional units in the larger quarters for the expansion of its production of sanitary products, printed specialties in menus, food containers, napkins, doilies and other paper goods. The firm is equipped to handle volume orders on these converted printed paper products and makes a specialty of catering to large institutions such as hotels, hospitals and clubs. It is equipped with units for printing crests, insignia, or imprints of original designs, and produces allied paper products in these designs to match. It also makes its own original designs in food containers for the bakery, confectionery and other industries. The recent developments in charlotte russe cups are novel colorings and designs to suit the individual needs of the customers of bakers.

### National Waterproofing Extends Production

With a broadening demand for its latest developments in waterproofed papers the National Waterproofing Company, with offices in the Drexel Building and plant in Camden, N. J., is planning to increase its production. The new line of waterproof papers which the firm developed this year is the No. 30 Stringland kraft. It is a reinforced string kraft with cotton yarn reinforcements made in standard stock sizes or to order in rolls and sheets.

The new Stringland kraft is produced in stock rolls 36 inches wide, containing 200 square yards and weighing 62 pounds. Another product which recently was developed by the National Waterproofing Company is the No. 3060 B-N building and insulating paper. It is a waterproof, air-tight, vermin-proof strong and lasting paper made in 36 inch rolls and containing 500 square feet and weighing 23 pounds.

### Hampden Paper Co.'s New Line

The Hampden Glazed Paper and Card Company, with offices in the Bourse, is now featuring its new 1929 line of novelty box covers for coming holiday requirements of the converters. The new holiday lines comprise many original designs in holly and Christmastide colorings of green and red. The line supplements the recently issued box covers known as the Multicolor line for 1929 of fancy covers. The new lines are on display at the Philadelphia offices and samplers are being shipped from the factory at Holyoke, Mass.

### John J. O'Leary Enters Waste Trade

Following a year's absence from the paper stock industry while recuperating his health, John J. O'Leary, former manager of the Daniel I. Murphy Company, is again engaged in the wholesale paper stock brokerage business. He occupies offices at 48 North Front street where he will conduct a waste material business specializing in rags such as new canvas, mill ends, remnants, and carpet rags. He also represents the Ernst Mayer agency for prominent European packers covering the Pennsylvania, New Jersey, Delaware and Maryland trade for that importer.

### J. H. Rex Resigns from Driver Organization

John Harvey Rex, vice president and sales manager of the John M. Driver Company of Philadelphia, Pa., since the organization of that company, has tendered his resignation to take effect September 1. He has not announced his future plans. Prior to his connection with the Driver Company he was sales manager for the Diamond State Fiber Company of Bridgeport, Pa., specializing in the manufacture of glassine and parchment papers, which mill has for the past few years been operated by the Glassine Paper Company.

## Seeks Paper Mill Site at Pensacola

PENSACOLA, Fla., August 17, 1929.—A citizens' committee is raising funds to secure a site for the location of a paper mill here.

An industry that will mean an annual payroll of over $1,000,000 and will employ over 500 men and women is almost within the city's grasp.

Pensacola citizens are determined to land this industry, one of the country's leading paper mills.

All that is needed is the fund to buy the site for the mill. Representatives of the paper company have approved the site and have agreed to rush construction of the mill as soon as the site is tendered.

Between $40,000 and $50,000 is needed to purchase the site, a tract of between 70 and 80 acres on Bayou Chico north of the Weis-Patterson Lumber Company.

The mill company which now has mills in Vermont seeks a Southern site so that it can be nearer to its southern markets and have a deep water outlet. There is no stock selling angle to the project. The company is amply financed and asks only a site which is in keeping with the movement of other big industries to the south where several cities have obtained great industries by giving suitable sites.

## Paper Quiet, Pulp Active in Finland

WASHINGTON, D. C., August 21, 1929.—The news print market in Finland is quiet with firm prices, according to a report from Consul James R. Wilkinson, at Helsingfors. The thin paper print market remains dull, and the wrapping paper market shows no new developments. The chemical pulp market has been very active and in 1929 stocks of sulphite have been exhausted.

## A New Waterway Route in New York

[FROM OUR REGULAR CORRESPONDENT]

WATERTOWN, N. Y., August 17, 1929.—A bill to incorporate a company which proposes to combine the use of the St. Lawrence River with New York State ship canals will be introduced in Congress when that body meets in December. Paper manufacturers of this district are sponsoring the project which means much to the entire industry. The plan is to open the St. Lawrence to navigation with the Barge Canal as an auxiliary for early spring and late fall use while no toll charges will be made and the entire project will be pushed through without an appropriation.

Lake Erie and Ontario are to be connected by a ship canal and another ship canal is to be built from Mexico Bay through Oswego, Oneida, Herkimer and Montgomery counties to the Hudson and authorization to divert water to the extent of 30,000 feet per second from the lakes to maintain sufficient flow will provide for the cross country route. The St. Lawrence ship canal is to be built to the head of the Lachine Rapids above Montreal and electric power is to be developed by paper manufacturing and other industries to the extent of 2,000,000 horsepower. The rates are to be reasonable and the income will amount to $160,000,000 a year which will eliminate the necessity for tolls or appropriation. The interests sponsoring the plan claim that neither this country or Canada will be asked to advance anything and the cost of electricity will be so reasonable that there will be demand for all that can be generated.

The proposition is at such startling variance from the general run of plans to do the public good that it takes one's utmost credulity to even entertain it. Almost never do promoters suggest a project involving the public unless a big appropriation stands first in the list of things to be secured while as to service and use they are always to be based upon the lowest possible figure. But here under the plan we will have a St. Lawrence ship canal and a tidewater ship canal through the state connecting the Hudson with the Great Lakes and we are to get electricity at reasonable rates considerably under present prevailing prices. The new waterway will undoubtedly be used by paper manufacturers in shipping their products and it is possible that it will take the place of railroads and other means of transportation which are now in general use.

## H. L. Kutter Gets Patent in Paper Machine

DAYTON, Ohio, August 19, 1929.—Herman L. Kutter, general manager of the Black-Clawson Company, Hamilton, has been granted a patent for a paper making machine on an application almost four years old.

Mr. Kutter, who is widely-known in the paper machinery field throughout the country, filed his application August 29, 1925.

Fifteen claims for new ideas were allowed. One-half interest in the patent has been assigned to Walter D. Randall, vice-president of the Champion Coated Paper Company, Hamilton.

Officially, the invention is described in the following language: "In a paper-making machine, a forming section of the Fourdrinier type comprising a shakable breastroll including a support therefor, a normally stationary frame carrying thereon table rolls and save-alls, said frame being supported independently of said breastroll and in alignment therewith, and means carried by said breastroll support and shakable therewith for deflecting fluid matter from the breast-roll to said save-alls."

## Wisconsin Forest Lands Inspected

APPLETON, Wis., August 19, 1929.—An inspection of the Wisconsin lands which will be set aside as a federal forest area was made last week by John E. Burch, of Washington, D. C., secretary of the National Forest Reservation Commission. He was accompanied by E. W. Tinker, district forester. Three districts, known as the Oneida, Moquah and Flambeau areas, totalling 350,000 acres, have been set aside for federal purchase. These will become national forests within the next twelve months, Mr. Burch believes.

# Huge Increase in Power Development in Canada

## Total Hydro-Electric Installations Now In Operation Amount to 5,528,000 H.P. — Various Undertakings Under Way Will Involve Additional Installations In Excess of 2,000,000 H.P.—Construction Actively Pursued On Several Large Projects

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., August 19, 1929.—Work is going ahead at a busy pace in organization for the construction of the giant hydro-electric plant which the Beauharnois Light, Heat and Power Company is planning on the St. Lawrence River just above Montreal. All the legislative preliminaries have now been completed with the exception of the official sanction of the Quebec Government to the detailed plans and specifications. As these have now been placed in the hands of the Government, formal approval is expected within the next few weeks.

### Financing of Beauharnois Project

Public interest is now centering on the financing of the project, and in this connection some interesting speculations are abroad. Considering the predominant place occupied in the hydro-electric field in this Province by the Shawinigan Water and Power Company and the Montreal Light, Heat and Power Company, the opinion appears to be that distribution of the power to be created would be far more successful than it could otherwise be if a certain measure of co-operation with these powerful concerns could be effected. Consequently there is talk of these companies becoming interested financially in the new concern, which would immensely simplify the problems from a business point of view and aid materially in straightening out the difficulties of financing.

There is no doubt that the withdrawal of Frank P. Jones from the project has put a new complexion on it. Mr. Jones is a wealthy man, with a remarkable record of industrial success behind him. He is of an extremely independent nature, and on more than one occasion has given existing power companies evidence of this. These companies opposed the Beauharnois project to the limit, and had Mr. Jones remained as the head of the syndicate the interesting struggle might have continued. The opinion now is that there will be no such costly fight in putting the scheme into practical effect as there was in securing legislation for it.

Meanwhile the newspapers are asking what will be the effect on public opinion of the withdrawal of Mr. Jones. It is stated in print that he sold his interest in the concession for $3,500,000, and while there is no disposition to criticize him for doing so, it is pointed out that the Government undoubtedly expected him to use his ability to carry the project through. However, the project is not a one-man affair, and never has been. When construction actually starts, and the benefits of the expenditures of the large amounts of money involved begin to make themselves apparent, interest doubtless will shift from personalities to the work itself.

Last year 550,000 horsepower was added to existing hydro-electric installation in Canada, bringing the total in operation to 5,328,000 h.p. The Minister of the Interior has now issued a statement showing that in the first half of the present year new developments with additions to existing plants have added nearly 200,000 h.p. to this total, while undertakings under way will involve a total installation in excess of 2,000,000 h.p. By far the largest proportion of these developments have been in Quebec, Ontario and Manitoba, mostly in connection with pulp and paper and mining industries.

### Installations Completed in Quebec

In Quebec installations already completed during the present year include the addition of fourth units to the Chelsea and Farmers developments of Gatineau Power Company of 34,000 h.p. and 24,000 h.p. respectively, and of the second unit of 25,000 h.p. at the Company's Bryson development and the addition of unit number eight 43,000 h. p. to the Shawinigan Falls development of the Shawinigan Water and Power Company.

Construction is being actively pursued on several large developments. At Chute a Caron on the Saguenay River the Alcoa Power Company is making rapid progress with a development which will have an initial installation of four 65,000 h.p. units scheduled for completion in 1931. The ultimate development is designed for an installation of 1,000,000 h.p. On des Prairies River near Montreal, the Montreal Island Power Company has work well advanced on a development which will have an initial installation of six 8,800 h.p. units and which it is expected will be in operation late in the present year. The James McLaren Company has a development actively under construction at High Falls on the Lievre River which is designed for an initial installation of 90,000 h.p. and an ultimate capacity of 120,000 h.p., the project also including a twenty-five thousand million cubic feet storage reservoir at Cedar Rapids and a 250-ton pulp and paper mill near Buckingham. Gatineau Power Company under the authority of the Quebec Streams Commission has virtually completed a dam at the outlet of Cabonga Lake at the headwaters of the Gens-de-Terre River which will impound forty-five thousand million cubic feet of water for the benefit of the company's power stations on the lower Gatineau River.

### Prospective Developments

Prospective developments in Quebec include those of the Shawinigan Water and Power Company on the upper reach of the St. Maurice River with a projected installation of 1,000,000 h.p. at three or four sites; an 80,000 h.p. development by Gatineau Power Company at Nigger Rapids on the Gatineau River, a 30,000 h.p. plant at Chats Falls on the Ottawa River by the Chats Falls Power Company and the 500,000 h.p. development of the Beauharnois Light, Heat & Power Company on the St. Lawrence River. It has also been recently announced that the Shawinigan Water and Power Company under the authority of the Quebec Streams Commission will develop a storage reservoir on the Mattawin River which will warrant the addition of 100,000 h.p. to the company's plants at Grand'Mere, Shawinigan Falls and La Gabelle.

### Other Large Developments

In New Brunswick the Saint John River Power Company has added the second unit of 20,000 h.p. to its development at Grand Falls on the St. John River, the third unit being scheduled for completion towards the end of the year. Construction is also under way of a 132,000 volt transmission line to carry power from Grand Falls to a 500-ton news print mill being constructed by the New Brunswick International Paper Company at Dalhousie on Chaleur Bay. On Nipisiguit River the Bathurst Power and Paper Company is adding a 5,000 h.p. unit to its hydro-electric station at Grand Falls.

In Nova Scotia the Nova Scotia Power Commission is actively proceeding with the construction of three developments on the Mersey River, the first at Upper Lake Falls with 7,750 h.p., the second at Lower Lake Falls with 10,600 h.p. and the third at Big Falls with 12,700 h.p. This power will fulfill a contract with the Mersey Paper Company which calls for the delivery of 20,000 h.p. on January 1, 1930, to supply a paper mill which that company is building at Brooklyn near Liverpool.

### Russian Pulpwood in Montreal

"Carrying coals to Newcastle" has had an equivalent aphorism in Montreal during the past week, for a steamship arrived in port here from Archangel, in the White Sea, loaded with Russian pulpwood. The cargo amounted to 1,700 cords, and was destined for the Hammermill Paper Company, Erie, Pa.

# Chicago Paper Market in Satisfactory Position

## Request for Various Standard Grades of Paper Keeps Up Insistently—Fine Paper Division Exhibits Strong Undertone—Paper Board Situation Practically Unchanged—Tissue Mills Have Caught Up With Demand—Prospects For Fall Considered Excellent

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., August 19, 1929.—The Chicago paper market is reported to be in as satisfactory a condition as it has been all year. While the seasonal decline in sales is noticeable in practically all of the lines, the demand keeps up insistently although in fairly small single orders.

A seasonal falling off in book paper is almost ended. Fine papers are satisfactory with the market strong. No change in board is reported while wrapping paper prices continue the same. According to Chicago representatives the tissue mills have now caught up with demand and only the ordinary run is being experienced with prospects for Fall declared good.

A number of mill representatives in Chicago have stated repeatedly that this is the best summer their lines have had in years. Each day, they say, the market is strengthening itself and opening up possibilities for a stronger tone.

### Chicago-Elgin to Change Quarters

The Chicago-Elgin Carton Company of Elgin, Ill., manufacturers of folding paper cartons, egg crates and other paper products have leased 10,000 feet of floor space in a building at Sycamore and are moving their equipment to that city according to word received today. The Chicago-Elgin Carton Company will employ about fifty laborers and have taken pains to procure quarters entirely suitable for future expansion. The report states that the company had been considerably handicapped because of inadequate quarters and that a great increase in orders to be filled had necessitated the change. Additional ground around the factory building has also been purchased with an eye toward further development.

### F. A. Borchers Joins Oxford Paper Co.

F. A. Borchers, formerly vice president of the Seaman Paper Company and long experienced as a mill representative and paper executive, has been appointed Western sales manager of the Oxford Paper Company and the Oxford Miami Paper Company with offices at 35 East Wacker drive, Chicago. Telephone numbers are listed as Central 0856 and Central 0857. The company handles high grade book papers, ledgers, bonds, writings, envelopes, M. F. and Supercalendered papers.

### Chicago Paper Houses Merge

W. E. Wroe, of the W. E. Wroe & Co. organization, is reported to have disposed of his holdings in that company. Mr. Wroe has retained an interest in the company bearing his name, although, for the past few years, he has been located in Texas. It is said that Bradner, Smith & Co., following Mr. Wroe's resignation, have purchased a minority interest in the company. No change has been listed in the organization except that W. H. Fleming, formerly first vice president, is now president, and H. Van Patten, formerly treasurer, has been elected first vice president and treasurer. The combination of Bradner, Smith & Co. and W. E. Wroe & Co. interests will undoubtedly be of genuine benefit to both progressive organizations.

### News of the Trade

A. S. Harman, well known salesman of Pilcher-Hamilton-Daily, has recently taken out a full fledged membership in the La Grange Country Club, La Grange, Ill. Another well known member of this club is Jim Coy, of the Flambeau Paper Company. Competition should be both keen and mighty interesting. Perhaps competition between the Chicago Paper Association, of which Mr. Harman's firm is a member, and between the Salesmen's Association of the Paper Industry, of which Mr. Coy is an officer, can be arranged.

A news item of unusual interest to many a paper executive and salesman who has called at the offices of the Flambeau Paper Company is that of the announcement of the marriage of Miss Helen Arrington to Harold Bue, assistant cashier of the City State Bank of Chicago. Miss Arrington has been secretary to Jim Coy for seven years and what Jim will do without her business ability is plenty for him to worry about. The wedding will take place in September.

The Chicago Paper Association held its regular meeting on Tuesday evening, August 13, at the Bismarck Hotel. General business conditions provided the chief topic of conversation. In reporting the meeting Leo Altholz, president, stated that "general conditions appeared to be very good, that a certain sureness and tightening up gave evidence of an excellent six months' business ahead."

Stock sizes and weights in standard mill grades, together with prices have been issued by the West Virginia Pulp & Paper Company, 35 East Wacker drive, Chicago. The sheet, bearing price list and general description of Super White, Super India, Machine Finish White, Eggshell White, White Bond, Blue Bond, Buff Bond, Pink Bond, Canary Bond, Goldenrod Bond, White Writing, Canary Writing, White Mimeograph, Index Bristols and Post-card is dated as of August 15.

The Eagle Envelope Company, manufacturers of envelopes and paper, has recently incorporated and have opened offices at 411 South Jefferson street, Chicago.

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## Netherlands Paper Industry Busy

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., August 21, 1929.—The paper mills of the Netherlands operated at full capacity during the second quarter of the year, according to a recent report from C. Gorter, office of the Commercial Attache, The Hague, to the Department of Commerce. Overdue orders, which could not be executed during the first three months of the year on account of ice conditions, were cleared.

Straw board plants in particular are reported to have been well employed, and while shipments were held up during the first quarter of the year the six months' figures are expected to show exports close to normal. As an instance of the optimistic view of their business taken by straw board producers, plans are now in course of consideration to establish a new straw board mill in the province of Groningen. Approximately 90 per cent of the Netherlands straw board output goes to foreign countries, chiefly to the United Kingdom. Wood pulp imports during the first five months of the current year have been considerably above those of the corresponding period last year, receipts of ground wood having increased by 100 per cent. While the increase in the tonnage of chemical pulp imported during this period was nearly as large, the increase in percentage registered was considerably less.

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## Paper Exports from Finland Decrease

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., August 10, 1929.—Exports of paper and board from Finland during the first five months of the current year amounted to only 116,492 metric tons as against 199,922 tons during the corresponding period last year. While nearly all items show a decline, the heaviest decreases were registered in shipments of news print and writing papers. Exports of boards, on the other hand, rose from 18,100 tons to 19,700 tons.

# Demand for Paper Is Improving in Toronto

## Local Distributors Report Distinctly Better Request For Standard Grades of Paper and Larger Quantity Selling—Conditions In Fine Paper Market More Satisfactory—Coarse Paper Section Rather Slow In Recovering—Paper Board Mills Busier

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ont., August 19, 1929.—The Toronto paper trade is recovering nicely from the effects of the holiday season and sales of nearly all lines of paper by wholesalers are increasing. This was quite evident during the past week when distributors reported a distinctly better demand and larger quantity selling. All fine papers are beginning to find a better and more satisfactory market than has existed since the vacation period reduced sales materially and it is believed that from now on the paper trade will enjoy really good business in all departments. The coarse paper section has been a little slow at recovering and the paper bag situation is still unsatisfactory owing to competition both from a domestic and foreign standpoint. Tissues, toilets and light weight papers, also, have been subject to outside competition but domestic sales and production are standing up well and prices have not been unsettled. The printing industry is well employed, with most of the larger firms making fair requisitions for paper. Coated stock is in fair demand under liberal use of that paper for catalogue and direct mail advertising, the volume of which is keeping up well.

### Mills More Than Usually Busy

Manufacturing operations all round are on a satisfactory level and have been less affected by the usual summer dullness than has been formerly the case. Board mills are beginning to get busier under a better demand from the paper box trade which is now entering upon the manufacture of Christmas lines of boxes, while the paper converting trade is picking up, with a fair demand for envelopes, loose leaves, forms, blank books and similar lines. The fine paper mills are all quite busy and in the case of book papers several of the mills are well booked ahead with orders. There is a brisk demand from the paper mills for rag and paper stock handled by the collectors and collections of waste generally by the dealers are satisfactory as regards volume. There is little change in waste prices, which are holding firm generally.

### Paper Mill Employees Hold Picnic

The Lincoln Division of the Alliance Paper Mills, Ltd., held their annual picnic a few days ago at Queenstown Heights with several hundred employees and their friends there, including many of the executives. The event was favored with fine weather. As usual the morning program consisted chiefly of soft ball games. A most interesting event was the soft ball game between the Lybster and Sulphite mills in which the former were successful in retrieving the King Tut Cup in spite of the efforts of Tom McLean who alternated as umpire and batter for the Sulphite team. The office staff were not successful in their challenge to the Lybster team so the cup returned to its old resting place. Aside from the sports and a fine picnic dinner, the event was featured by a presentation of a gold wrist watch to A. G. Napwick, who is leaving the employ of the company after serving for some years in the capacity of superintendent.

### Forest Fires Raging in Ontario

Forest fires are raging in the Kenora and Rainy River districts with increasing intensity and there is little hope that they will be brought under control unless there is a general rain very soon. The aeroplane patrol at this base has been more than doubled and more than 300 men have been added to the contingent fighting the fires in the bush. The district fire ranger has made repeated calls to the young men of the districts to enlist to fight the greatest menace of the north country, but the number of men fitted for this hazardous work is limited.

Two methods are most generally used in fighting the fires. One is the pump and the other is what is known as "back firing." At the present time there are about a hundred pumps at work in these two districts alone. When the pump fails experienced woodsmen and fire fighters are sent forward to "back fire" a strip of forest bordering a creek or lake. This means starting a second fire to check the first. It is a risky undertaking and requires a thorough knowledge of woodcraft.

J. B. Larkin, head of the Federal Paper Company, Montreal, and now in charge of the various branches of the Howard Smith Company and Canada Paper Company, devoted to the marketing of paper, has arrived in Toronto and will be located for some time at the Kilgour plant and office on Wellington street. Mr. Larkin has entered upon the work of coordinating the system of handling stock and sales in line with the policy adopted by the interested companies and his many friends in the paper trade in Toronto are pleased to have him in their ranks. In an interview he stated that the business outlook for the Howard Smith Company, the Canada Paper Company, and others in the group was very bright and while things were naturally quiet during the holiday season, it was his opinion that the Fall would see a return to really good business conditions. Kilgours, Ltd., Toronto, is one of the firms in the group, manufacturing wrapping, paper boxes, etc.

### Notes and Jottings of the Trade

Superintendents and executives of the Lincoln Division of the Alliance Paper Mills, Ltd., gathered at the St. Catharines Golf and Country Club a few days ago and at a dinner, presided over by George C. Winlow, sales manager, did honor to A. G. Napwick, who is retiring as general superintendent to take up some special work in the pulp and paper field. Mr. Napwick was presented with a fully equipped traveling bag and many words of regret at his departure were spoken by heads of departments and others. C. N. Candee, formerly chief chemist of the plant, has been appointed mill manager of the Lincoln mill at Merritton and will take over Mr. Napwick's duties.

W. H. Aird, assistant to the managing director of the Howard Smith Paper Mills, has gone on a vacation trip to the Maine Coast.

K. S. Maclaughlin, general manager of the Lincoln Division of the Alliance Paper Mills, Merritton, Ont., and Mrs. Maclaughlin, are staying at the Royal Muskoka Hotel in the Muskoka region of Ontario.

Harold Crabtree, vice-president of the Canada Paper Company, Montreal, was a business visitor in Toronto a few days ago.

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### Crystal Tissue Co. Issues Stock

DAYTON, Ohio, August 19, 1929.—The recent offering by W. E. Hutton & Co. of Dayton and Cincinnati, of 18,600 shares of no-par value common stock of the Crystal Tissue Company, Middletown, proved of much interest. The offering was made at $23 a share and was readily absorbed. Application then was made to have the security listed on the Cincinnati Exchange.

Directors inaugurated dividends on the common at the rate of $1.50 to be made payable quarterly July 1. The business was established in 1894 and was acquired by the Crystal Tissue Company in 1920, which has continuously and successfully conducted the plant, with Z. W. Ranck as president. Its products are exported to England, South Africa, Australia, Central and South America, the Philippines and other countries. The company owns approximately 60 per cent of the voting stock of the Crystal Waxing Company, manufacturers of a line of lightweight waxed paper used by confectioners, florists and bakers. The Crystal Tissue Company has two mills of brick construction.

BIRD MACHINE COMPANY

SOUTH WALPOLE - MASSACHUSETTS

3156

# Program for Technical Association Meeting

The fall meeting of the Technical Association of the Pulp and Paper Industry, which will be held in Richmond, Va., on September 24 to 26, and in Washington, D. C., on September 27, will conform in program to the style of meeting held last year at Wausau, Wis., when nearly four hundred attended.

The mornings in Richmond will be devoted to the discussion of technical papers, the afternoons to mill visits and the evenings to dinners, entertainments and dances which will be informal.

### Symposiums

Rather than have a program in which a large number of subjects are discussed the morning programs will be used largely for symposiums on subjects vital to present day pulp and papermaking. It will be remembered that at Wausau three symposiums were considered, namely, forest products research, technical control, and waste. This year three timely subjects are presented as follows: pulp evaluation, shrinkage and paper standardization.

### Pulp Evaluation

Under the capable leadership of Donald E. Cable of the Oxford Paper Company, the TAPPI Committee on Physical Standards for Pulp has been studying the ways and means to bring about an acceptance of a suitable method for measuring pulp quality. Three papers on this subject will present data upon which the discussion will be based. The men to read these papers are Harry Bradford, of the Rex Paper Company; H. A. Rothchild, of Kimberly-Clark Corporation; and J. E. O'Connell, of the Lake St. John Power and Paper Company, Dolbeau, P. Q. The Committee on Physical Standards is engaged in carrying on a large amount of cooperative investigations to determine the relative merits of the laboratory beater, the ball mill and other hydrating equipment. W. F. Moore, of the United States Testing Company, is making an exhaustive review of the literature dealing with this subject which he expects to publish in the near future, thereby making a most valuable contribution to the literature of pulp evaluation.

### Patent Possibilities

Charles W. Rivise, a member of TAPPI, and a Philadelphia lawyer, interested in patent work, will read a most interesting paper dealing with the patentable features of machinery and process developments. Mr. Rivise has made a thorough study of many cases of paper mill patent litigations and has come to certain conclusions that should be of real interest to TAPPI engineers, chemists, and inventors.

### Shrinkage

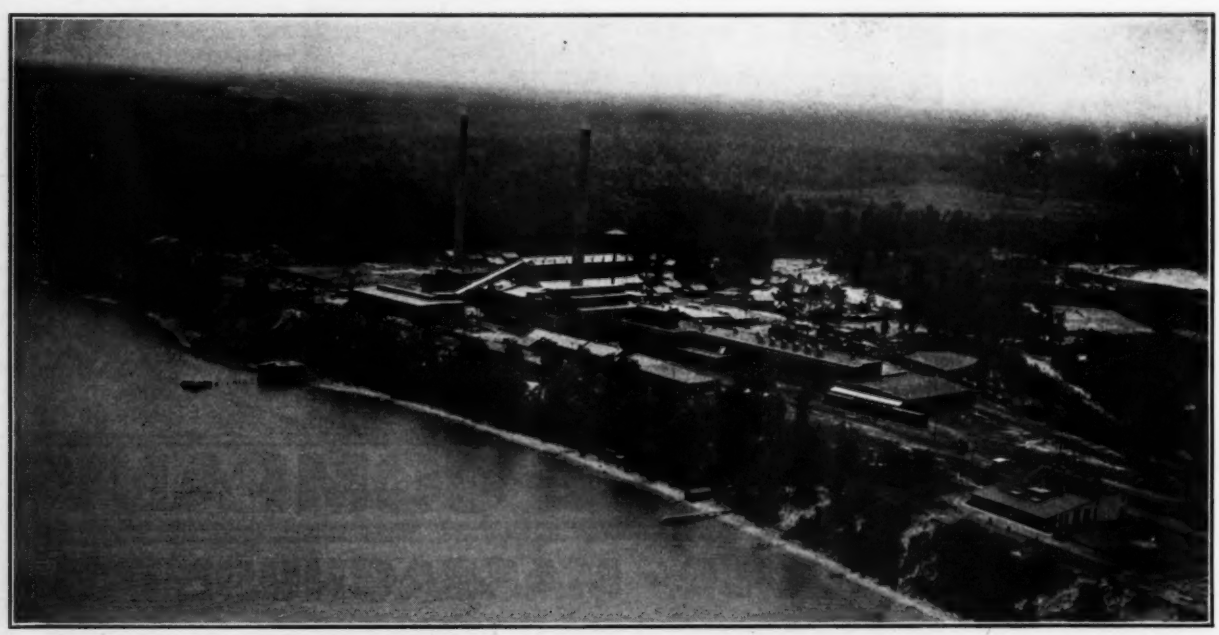
What portion of the materials used in papermaking may we reasonably expect to lose unaccountably? The cost men have been considering this subject and have come to conclusions other than those arrived at by technical men. The discussion of this subject following the reading of papers by Aubrey Taylor, of the Bedford Pulp and Paper Company, and Donald K. Pattillo, of the National Aluminate Corporation, should reveal facts that will assist many mill men in reducing waste.

### Paper Standards

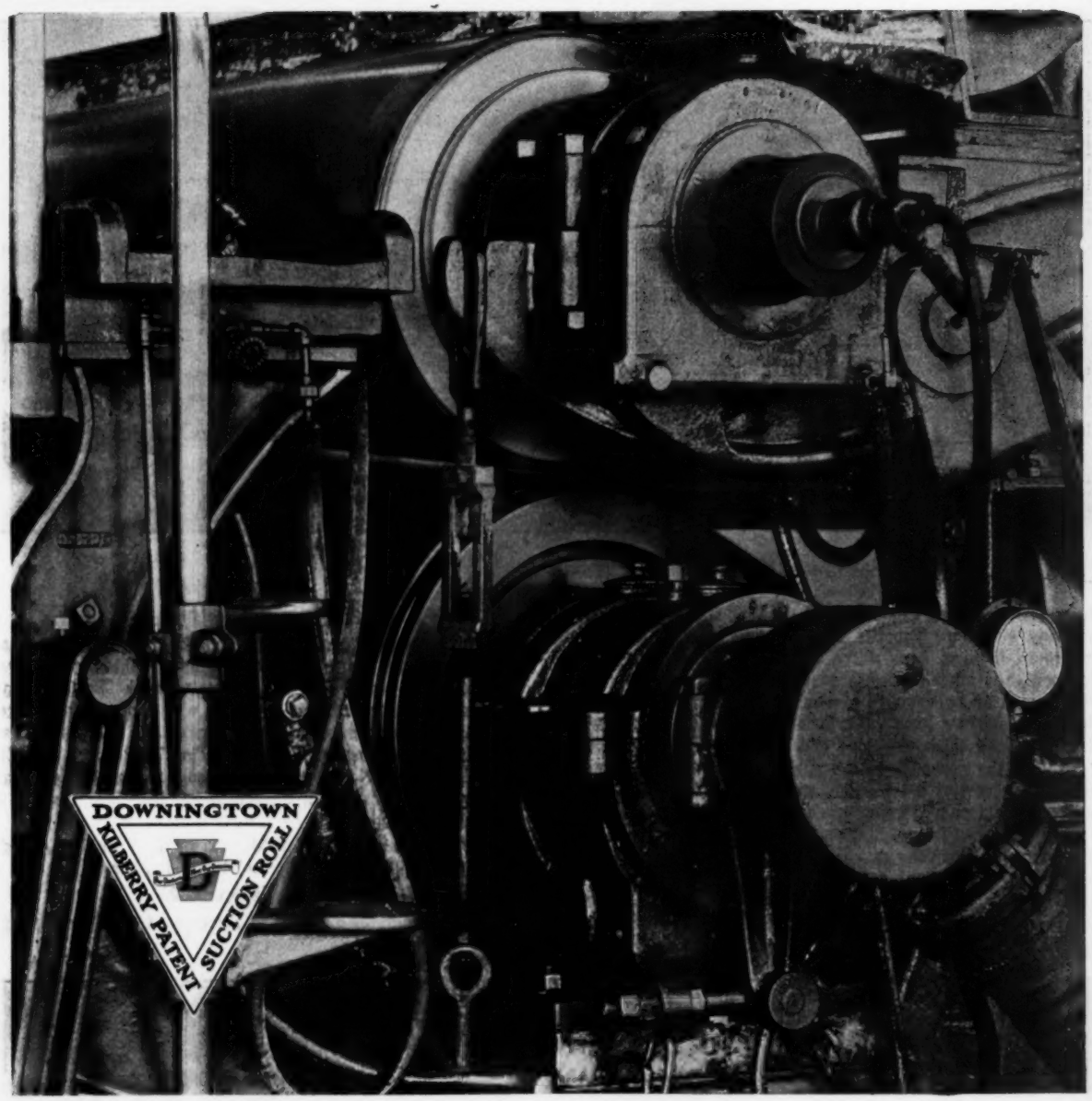
Inasmuch as the Paper Section of the Bureau of Standards will keep "open house" for TAPPI members on September 27 it is quite appropriate that some of the objectives of that famous organization be given consideration at the Richmond meeting so that when the Bureau is visited, a greater appreciation of the work being done there will be had. B. W. Scribner, chief of the Paper Section, will act as master of ceremonies and will outline the program of work and indicate some of the Bureau's accomplishments. Merle B. Shaw, who is in charge of the paper mill at the Bureau, will read a paper on "Paper Making Research." Mr. Shaw did a large amount of work in preparing for the change in composition of paper currency. F. T. Carson, inventor of the Carson size tester, and other instruments, will read a paper dealing with paper standards.

### Other Papers

Several papers on special subjects will be presented to assure a well balanced general program. O. W. Callighan, of Edgar Brothers Company, TAPPI'S first contributing member, will read a paper dealing with the use of American clays for coating and loading. James A. Cameron, of the Cameron Machine Company, will discourse on slitting and winding principles, and R. R. Baker, of Westinghouse, will describe some new sectional drive developments.



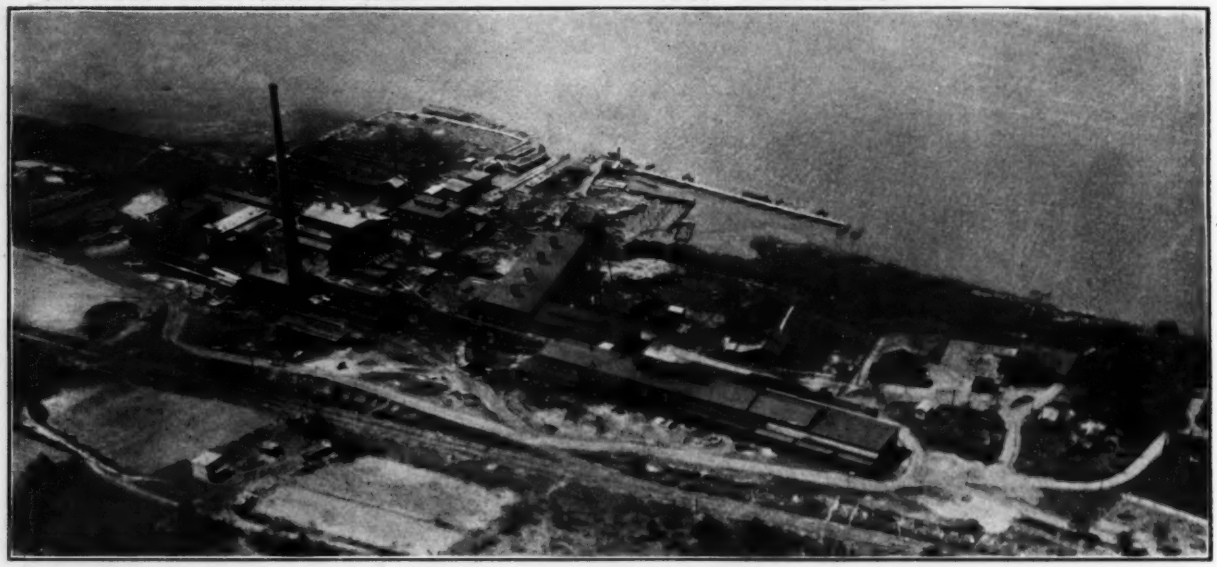
AIRPLANE VIEW OF HUMMEL-ROSS FIBRE CORP., HOPEWELL, VA.




# E. B. Eddy Co., Ltd., Hull, Canada, uses two Kilberry Suction Rolls

This photo shows one of their Kilberry Suction Press Rolls on a 232" news machine which was taken while the machine was running at 900 ft. per minute on 34 lb. newsprint paper. The shell of this roll is made of our Samson Bronze, to operate under very heavy pressure. The top roll is made of granite and weighs 7 tons. Compound levers and weights produce nip pressure of 10 to 11 tons. This Kilberry Suction Roll has been in service over a year and it has required no repairs or adjustments during that time. Catalog on request.

**DOWNINGTOWN MFG. CO.**
**DOWNINGTOWN, PA., U. S. A.**



AIRPLANE VIEW OF THE CHESAPEAKE CORP., WEST POINT, VA.

The local plants of the Albemarle Paper Company, Standard Paper Manufacturing Company, and the Manchester Paper Board Company will afford Tappists an opportunity to watch the manufacture of blotting, book, filter, bonds, offset, specialties, kraft, chipboard, and other grades of paper. The trip to Hummel-Ross will provide an opportunity to observe the manufacture of sulphate pulp, sulphate liner and cylinder specialties, boxboard, wrappings, gummed tapes, envelope and other papers, and at West Point, Va., the new mill of the Albemarle-Chesapeake Company will be in process of construction, while at the Chesapeake Corporation sulphate pulp is being made together with saturating felt and kraft papers. In Washington the District of Columbia Paper Manufacturing Company manufactures soda pulp from pine and also a large number of special papers beautifully finished and embossed. The entire plant of the Bureau of Standards with its experimental paper machine and the Government Printing Office with its great printing and book mailing plants will be open for inspection.

**Banquets and Entertainment**

At the Jefferson Hotel, the general Richmond TAPPI headquarters, plans are being made to have one of the most elaborate social programs which TAPPI has ever enjoyed. Further details regarding this part of the program will soon be announced. Reservations for rooms at the Jefferson and Wardman Park Hotels should be sent to the Secretary of TAPPI, 18 East 41st street, New York, N. Y., at once. Be sure to travel by train and secure your certificate entitling you to one half fare privilege on your return trip.

Tentative Program of the Fall Meeting of the Technical Association of the Pulp and Paper Industry

MONDAY, SEPTEMBER 23

7:00 p.m. Dinner for members of Executive Committee and committee chairmen.

PLANT OF THE DISTRICT OF COLUMBIA PAPER MFG. CO., WASHINGTON, D. C.

# Sherlock Holmes' Advice

***Sherlock Holmes*** said that a man's brain was like an attic: it could hold just so much. It could be filled with rubbish, or choice things could be put there.

Now a paper mill gets that way too—filled up with old machinery. There comes a time when house-cleaning is needed. The room most neglected is apt to be the beater room. If you go down and look over your beater room now you will probably decide that you could make more paper and better paper if you had better beaters. You know "your paper is made in your beaters" so if you really do want to improve matters you should start with your beaters.

Clear out the old beaters and put in Dilts New Type. They will make a world of difference. They circulate faster and better and use less power. They are sensible in design and a great improvement over the old style beating engines that have not been changed in a life time.

Don't let your business be handicapped and your entire investment endangered simply because you lack Dilts New Type Beating Engines in your mill.

VICE-PRESIDENT

DILTS MACHINE WORKS, INC.
Fulton, New York

TUESDAY, SEPTEMBER 24

8:00 a.m. Registration at Jefferson Hotel.
9:30 a.m. General Session in Auditorium of Jefferson Hotel.
9:30 a.m. Business Meeting, P. H. Glatfelter, chairman. Committee Reports.
11:30 a.m. Paper: "What is Patentable in Papermaking," by C. W. Rivise.
12:00 m. Paper: "Slitters and Winders," by J. A. Cameron.
1:00 p.m. Luncheon, Jefferson Hotel.
2:00 p.m. Visit to Mills: Albemarle Paper Company, Standard Paper Mfg. Company, Manchester Pulp and Board Company.
7:00 p.m. Dinner and Entertainment, Jefferson Hotel.
9:00 p.m. Dancing, Jefferson Hotel.

WEDNESDAY, SEPTEMBER 25

9:00 a.m. General Session. D. E. Cable, chairman. Pulp Evaluation Symposium.
Paper: "Pulp Testing," by H. C. Bradford.
Paper: "The Beater Method of Evaluating Pulp," by H. A. Rothchild.
Paper: "Estimating Pulp Quality," by J. E. O'Connell.
11:00 a.m. Paper: "Recent Developments in Domestic Clay for Coating and Loading," by O. W. Callighan.
11:30 a.m. Paper: "A New Sectional Speed Regulator for Sectional Paper Machine Drier," by R. R. Baker.
1:00 p.m. Luncheon, Jefferson Hotel.
2:00 p.m. Visit to Mills of Hummel-Ross Fibre Company, Hopewell, Va.
7:00 p.m. Banquet and Entertainment, Jefferson Hotel.

THURSDAY, SEPTEMBER 26

9:00 a.m. General Session. M. A. Krimmel, chairman. Shrinkage Symposium.
Paper: "Invisible Losses in Paper Manufacturing," by A. T. Taylor.
11:00 a.m. Paper: "Shrinkage Reduction," by D. K. Pattillo.
B. W. Scribner, chairman Paper Standards Symposium.
Paper: "Paper Making Research," by M. B. Shaw.
Paper: "Paper Standard," by F. T. Carson.
1:00 p.m. Luncheon, Jefferson Hotel.
2:00 p.m. Visit to Mills: Chesapeake Corporation, West Point Corporation, West Point, Va.

NOTE.—As the opportunity affords, any questions that members desire to have discussed will be taken up during the General Session. Write your questions on paper and give them to the Secretary.

NOTE.—Transportation by train to Washington on Thursday evening. Train leaves Broad Street Station, Richmond. Headquarters in Washington at the Wardman Park Hotel.

FRIDAY, SEPTEMBER 27

Headquarters, Wardman Park Hotel, Washington, D. C.
9:30 a.m. Busses leave hotel for visit to the U. S. Bureau of Standards and the District of Columbia Manufacturing Company.
2:00 p.m. Lunch at U. S. Government Printing Office, visit to departments of Printing Office.

NOTE.—Any members desiring to visit other places in Washington please notify the Secretary or H. R. Harrigan, of the District of Columbia Paper Manufacturing Company, so that special transportation arrangements may be made.

## Luther B. McMillan Dead

In the death of Luther B. McMillan, for thirteen years general consulting engineer of the Johns-Manville Corporation, engineering science has lost one of its outstanding personalities.

Mr. McMillan was born at Bem, Mo., September 21, 1891. He was graduated from the Texas Agricultural and Mechanical College in 1911 with the degree of Bachelor of Science in mechanical engineering. He later took graduate work in mechanical engineering and chemical engineering at this institution and was instructor in mechanical engineering in 1912 and 1913. He received the degree of Mechanical Engineer in 1912 and of Chemical Engineer in 1913.

He was awarded a fellowship in engineering at the College of Engineers of the University of Wisconsin for 1913-14 and received the degree of Master of Science in 1914. After serving two years as instructor in steam and gas engineering at this institution and specializing in research pertaining to the science of heat transmission, with particular attention to heat transfer through insulation, he became general consulting engineer for the Johns-Manville Corporation.

Mr. McMillan was a member of the American Society of Mechanical Engineers, American Society of Heating and Ventilating Engineers, the American Society of Refrigerating Engineers and the Society of American Military Engineers, and belonged to the Engineers Club, Western Universities Club, and the Texas Agricultural and Mechanical College Club of New York.

Always a very active member of the American Society of Mechanical Engineers, he served on many important committees and was a member of the Council at the time of his death. His research work on heat insulation was notable. In 1916 he received the Junior Award of the American Society of Mechanical Engineers for a paper entitled "The Heat Insulating Properties of Commercial Steam Pipe Covering." This paper focused attention on a subject that has been growing in importance ever since, and it is still rated as one of the outstanding contributions on the subject. Other notable papers presented by him before this society were "Heat Transfer Through Insulation in the Moderate and High Temperature Fields" and "Heat Insulation Practice in the Modern Steam Generating Plant."

He was frequently called upon to read papers before other engineering societies, including the American Society of Heating and Ventilating Engineers, the Iron and Steel Electrical Engineers Society and the American Society of Refrigerating Engineers. He also contributed many articles on various phases of insulation to the technical press and prepared technical data for Kent's and Marks' Handbooks, the American Society of Heating and Ventilating Engineers' Guide, the Handbook of the National District Heating Association and similar publications.

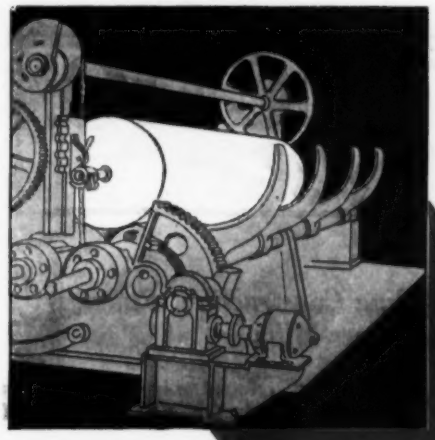
Due to his standing in his profession he was prominently identified with the National Research Council. From 1924 to 1928 he served on the subcommittee on heat transfer and in 1928, when the Division of Engineering and Industrial Research authorized the organization of the committee on heat transmission he was elected a member of the executive committee and also appointed chairman of the subcommittees on thermal insulation.

His services for the Johns-Manville Corporation constituted a record of marked achievement in the insulation field. Always searching for improved methods, he had to his credit the development of many important insulating materials and improvements in their manufacture and application. The thermal insulation testing laboratory of the corporation at its Manville factory, regarded as one of the most completely equipped private laboratories in the United States for investigation work pertaining to all classes of insulating materials, was established under Mr. McMillan's direction.

Mr. McMillan was an enthusiast in aviation and had great confidence in the future of the industry. He was a licensed pilot, capable of expert control of planes himself and frequently utilized this method of transportation in traveling over the wide range of territory covered by his professional activities.

## Charles H. Abel Weds

APPLETON, Wis., August 19, 1929.—Announcement is made of the marriage of Charles H. Abel, chemist of the Kimberly-Clark Corporation at Niagara Falls, N. Y., and Miss Henrietta Foth, of Neenah, Wis. The ceremony took place last week at Menasha, Wis.



# The MODERN Way to Handle Paper Rolls

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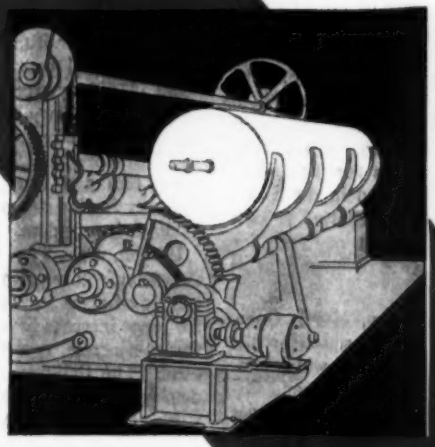
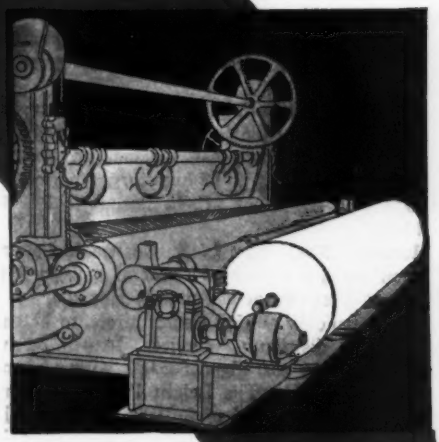


**Today's the day of "ROBOTS"—mechanical men to take the place of human brawn and effort. Which accounts for the instant acceptance of the new *Roll Handling Device* on the Bagley & Sewall Improved Winder.**

## Winder to Floor in a Few Seconds ... Without Manual Handling

**Handling of the finished rolls is entirely automatic and surprisingly simple. Upon the completion of a roll the drums roll it into the rocker arms which quietly and gently lower it to floor or truck, in a few seconds, without danger of marring the roll or springing the shaft. No overhead tackle, no manual wrestling, no lost time, no effort, no risk to operators.**



**Uniformly tight rolls assured by patent drum spacing adjustment; compensating counter balance; full roller bearings; true dynamic balance; freedom from vibration; and other special, exclusive features.**

**As nearly a complete solution of winding problems as mechanical ingenuity and technical skill have yet devised.**

We'd like to tell you more about it—write us.

## The Bagley & Sewall Co.

Watertown, N. Y.

# CONSTRUCTION NEWS

*A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills*

### Construction News

**New Orleans, La.**—The Kieckhefer Container Corporation, 16th and Canal streets, Milwaukee, Wis., manufacturer of corrugated fiber containers, has arranged for a lease of property formerly occupied by the Empire Rice Milling Company on Tchoupitoulas street, New Orleans, consisting of a main one-story building and four-story wing unit, heretofore used as an elevator. The Kieckhefer company will remodel and improve for a new branch plant, and will install equipment for regular production for distribution in Southern territory; a portion of the works will be converted for experimental service, to develop means for the utilization of rice straw and other raw materials secured in the South for container production. The entire project is reported to cost upward of $100,000. L. G. Lea, formerly district manager for the company at San Francisco, will be in charge of operations at New Orleans.

**Neenah, Wis.**—The Kimberly-Clark Company, North Commercial street, has secured permission from the state for the construction of a new converting unit at its plant, for which contract was recently let, as well as the erection of a storage and distributing building for finished stock. Work will be placed under way at once.

**East Walpole, Mass.**—The Hollingsworth & Vose Company, 333 Washington street, Boston, Mass., has work under way on a new addition at its mill at East Walpole, to be used primarily for machine shop service, reported to cost more than $25,000, with equipment.

**Indianapolis, Ind.**—The United States Corrugated Fibre Box Company, 1315 Martindale avenue, has completed plans and is said to be planning an early call for bids on general contract for a new addition to plant, to be one-story, reported to cost more than $45,000, with equipment. C. E. Bacon, Odd Fellows Building, is architect, in charge.

**Houston, Tex.**—The L. S. Bosworth Paper Company, 520 Preston street, has awarded a general contract to the E. G. Maclay Company, Post-Despatch Building, Houston, for the construction of a new building at 1512 Center street, to be used primarily for storage and distributing service. It will be two-story, 50x125 feet, reported to cost about $35,000, with equipment.

**Brooklyn, N. Y.**—The Leight Paper Company, Inc., recently organized with a capital of $20,000, by Louis Leight, 645 Lefferts avenue, Brooklyn, and associates, is said to be planning the early operation of new local plant for the manufacture of paper boxes and containers. Abram Leight, 2171 Union street, Brooklyn, is also interested in the new organization.

**Chicago, Ill.**—The Bermingham & Prosser Company, 160 North LaSalle street, paper goods, has concluded negotiations for the purchase of property at Adams and Sangamon streets, 95x118 feet, for a reported consideration of $47,500. The property adjoins a four-story and basement unit, acquired by the company a number of months ago for storage and distributing service, and will be used for expansion at that location.

**Fredericksburg, Va.**—The Sylvania Industrial Corporation, 122 East 42nd street, New York, referred to in these columns last week, as projecting plans for new plant, near Fredericksburg, for the manufacture of transparent papers and other processed paper stocks, has awarded a general contract to the Hughes-Foulkrod Company, Schaff Building, Philadelphia, Pa., for the construction of initial mill units, and work will proceed at an early date. The plant will comprise a group of six buildings, aggregating about 187,000 square feet of floor space, with boiler plant, machine shop and auxiliary structures. The general contractor will ask sub-bids for different portions of the work. The entire project will cost close to $1,000,000, with machinery. The Ballinger Company, 12th and Chestnut streets, Philadelphia, is architect and engineer for the project, and will supervise construction. Roger N. Wallach is president.

**Easton, Pa.**—The Individual Drinking Cup Company, Easton, manufacturer of paper cups, dishes and other paper goods, has completed plans for the construction of a new addition to its plant for large increase in present capacity. It will be three-story, reinforced-concrete, reported to cost more than $100,000, with equipment. The Ballinger Company, 12th and Chestnut streets, Philadelphia, Pa., is architect and engineer. It is proposed to begin work at an early date.

**New York, N. Y.**—Ragone Brothers, 563 Water street, paper stocks, James Ragone, head, have purchased the building at 246 Water street, near Beekman street, five-story, and are said to be planning to occupy for expansion.

**Chillicothe, Ohio**—The Mead Strawpulp Company, a subsidiary of the Mead Pulp and Paper Company, Chillicothe, is having plans drawn by the Management, Engineering and Development Company, Callahan Bank Building, Dayton, Ohio, for its proposed new straw pulp mill, recently referred to in these columns. Plant will consist of several units and is reported to cost more than $1,000,000, instead of smaller amount, previously noted. It is expected to ask bids on general contract at an early date.

**Winston-Salem, N. C.**—The Old Dominion Paper Box Company, Winston-Salem, has closed negotiations for the acquisition of the local plant of the Hanes Rubber Company, including tract of about 2½ acres of land, and is said to be planning to occupy for expansion, following proposed remodeling and improving. Considerable increase in present output will be arranged. D. H. Dillard is president.

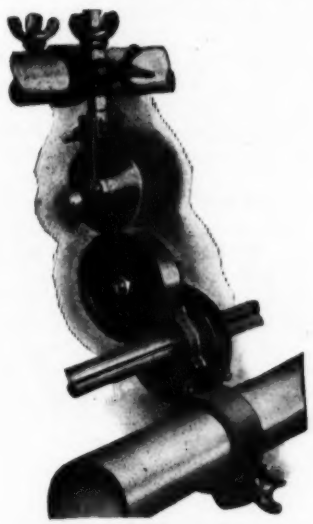
**Pittsburgh, Pa.**—The Keystone Box Company, 28th and Smallman streets, manufacturer of paper boxes and containers, has begun the construction of proposed new addition to its plant for increased capacity, to be three-story, 50x100 feet, reported to cost close to $65,000, with equipment. Peter Dietz, Lyceum Building, Pittsburgh, is architect and engineer.

**Menasha, Wis.**—The Gilbert Paper Company, Menasha, has approved plans for the construction of a new addition for increased capacity, reported to cost close to $55,000, with equipment. Superstructure will be placed under way at once. Albert C. Gilbert is general manager.

**Milwaukee, Wis.**—The Economy Paper Box Company, 1148-52 Hotton street, manufacturer of waxed papers, etc., plans re-

# "M. & W." Removable Bottom Slitters

*Especially designed for wide and fast-running paper machine drum winders*



THE GREATEST TIME-SAVING DEVICE FOR WINDERS IN RECENT YEARS

## New and Desirable Features

1 Bottom slitters supported by arms from a stationary bar exactly the same as the top slitters, and are independent and removable—and all driven independently from a small, slow-running shaft.

2 The troublesome high speed, large diameter bottom slitter shaft is dispensed with, and a smaller diameter shaft used, running one-third the speed, and in ball bearings in slitter arms.

3 Slitters are adjusted to width of sheet—same as the top slitters.

4 Disc slitters or double edge band slitters may be used, and are carried on small spindles on ball bearings.

5 The wear of slitters caused by the vibration of the heavy slitter shaft eliminated.

6 A bad cutting bottom slitter is more likely to be replaced by a good one and a clean edge made—Removing and resetting all slitters being unnecessary.

7 Labor saved by not handling the slitter shaft, heavy slitters, etc.

(PATENTS PENDING FOR THESE IMPROVEMENTS)

**Slitting Attachments with "M. & W." Removable Bottom and Top Slitters can be supplied for drum winders, any width**

*FURTHER PARTICULARS UPON REQUEST*

The MOORE & WHITE Co.
PHILADELPHIA, PA.
N. PHILA. STA. PENNA. R.R.
PAPER MILL MACHINERY

building of portion of plant, recently destroyed by fire with loss reported in excess of $75,000, including equipment. It is said that reconstruction will cost close to a like amount.

**New Westminster, B. C.**—The Westminster Paper Company, New Westminster, has authorized plans for the rebuilding of the portion of its mill on Fraser River, recently destroyed by fire, and it is expected to begin superstructure at an early date; a list of equipment for replacement will soon be arranged. The entire project is reported to cost close to $1,000,000.

**Chatham, N. B.**—The International Pulp and Paper Company, Ltd., Montreal, Que., is said to have plans maturing for the construction of a new pulp and paper mill at Chatham, to consist of several units, reported to cost more than $1,000,000, with equipment. The company is also reported projecting plans for a similar mill at St. Leonard, N. B., at a later date, to cost close to a like sum.

**New Orleans, La.**—The Celotex Company is running on a maximum production schedule at its wall board mills at Marerro, near New Orleans, and with the installation of additional equipment, has recently advanced manufacture. A full working force is being employed. The present basis will be continued for an indefinite period. Headquarters of the company are at 645 North Michigan avenue, Chicago, Ill. B. G. Dahlberg is president.

### New Companies, Etc.

**Waterbury, Conn.**—The Standard Paper Company, Waterbury, has been incorporated with a capital of $75,000, to manufacture and deal in paper goods of various kinds. The company will begin business with an actual paid-in capital of $50,000. The incorporators are Charles Vineburg, 36 Irving street, Waterbury; and E. L. Faure, New Haven. The first noted is representative.

**Buffalo, N. Y.**—The Gainsborough Card Company, Buffalo, has been incorporated with a capital of 1,000 shares of stock, no par value, to manufacture and deal in card stocks. The company is represented by Charles B. Mouthrop, Elliocott Square, attorney.

**Georgetown, Del.**—The Bridgeville Paper Company, Georgetown, has been chartered under state laws with capital of 300 shares of stock, no par value, to manufacture paper goods. The company is represented by Charles E. Brown, Bridgeville, Del.

## American Writing Builds Bridge

In line with the many prominent improvements made in its properties by the American Writing Paper Company, Inc., of Holyoke, Mass., a railroad bridge has just been erected across the second level canal in Holyoke, which carries a spur track and connects the Company's B. & H. —Wauregan Division direct with the Boston & Maine Railroad.

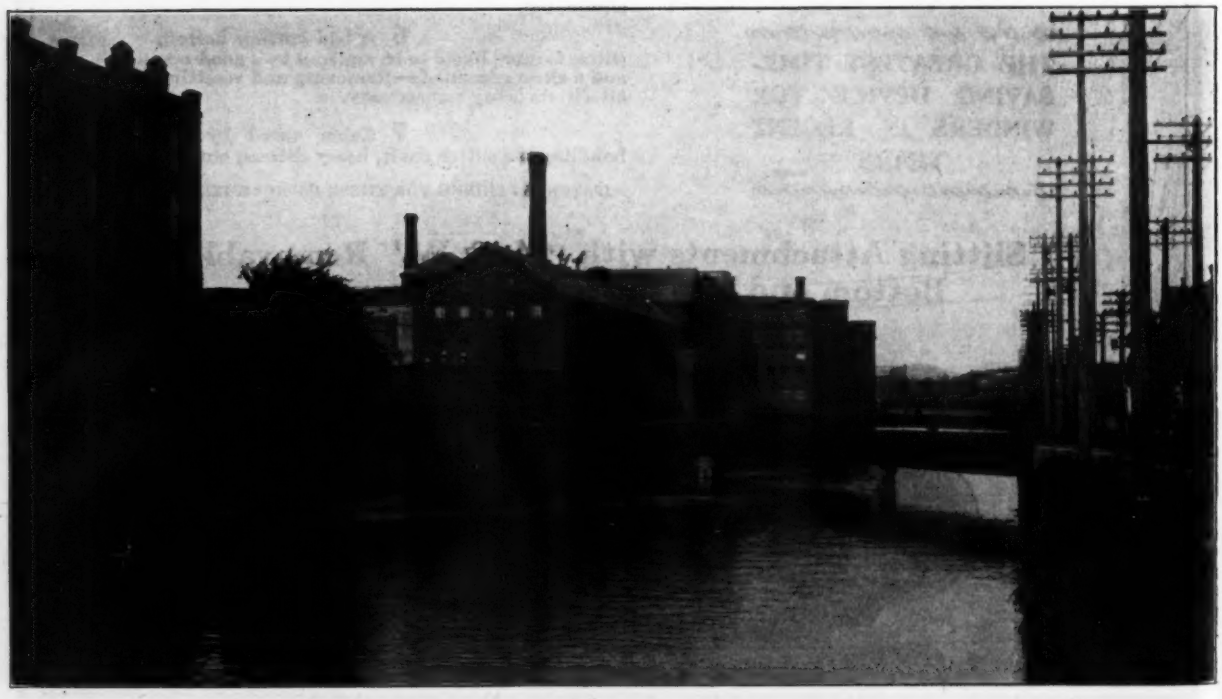
This was the only division of the company which did not have direct contact with a railroad.

In making this new bridge possible, and to allow for the installation of the double spur tracks, it was necessary to remove a corner of one of the older mill buildings, which is now used as a warehouse. A New boiler plant was built so that coal can now be unloaded direct from the cars into the boiler room. The field for the storage of reserve coal is adjacent to both the boiler plant and spur track. This has greatly improved the appearance of the property from Dwight street, one of the main arteries of traffic in Holyoke and has provided a large parking space for the cars of employees of the B. & H.—Wauregan Division. The Employment and Payroll Departments and the new Chemical Laboratory of the Company have recently been transferred and are now included in this division

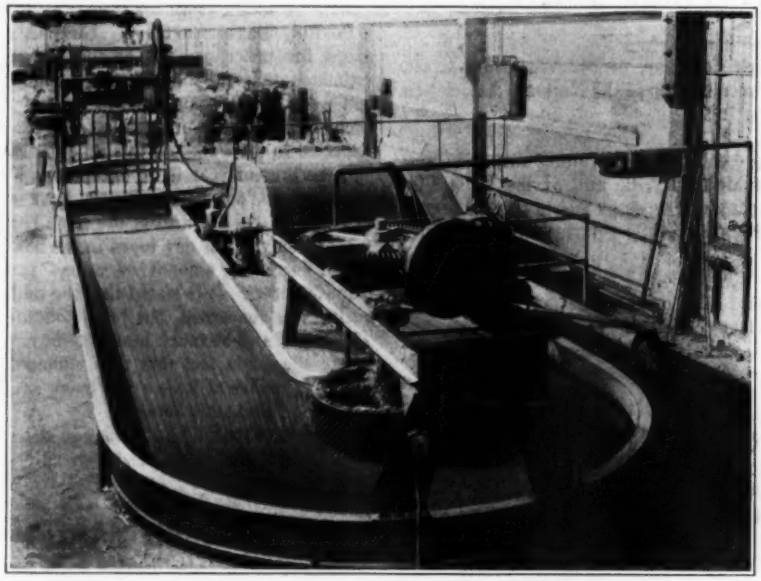
The new bridge will make possible a very substantial saving in transportation costs at this division. In addition it will facilitate the movement of raw material and finished products.

It is such planning and construction work as this which is responsible for much of the good-will acquired by the new company under Sidney L. Wilson, its president, and president of the American Paper and Pulp Association.

The new bridge is only a small part of the rehabilitation program laid out under the direction of L. C. Reynolds, assistant to the president, and Andrew Jackson, chief engineer, who has supervised the work. The bridge, a three span structure, was designed by Raymond Palmer, consulting engineer of Holyoke. The concrete foundations or substructure consisting of two abutments and two piers were installed by Daniel O'Connell & Sons of Holyoke. The steel work was fabricated and installed by the Boston Bridge Works of Boston.



NEW BRIDGE AT B. & H. DIV. OF AMERICAN WRITING PAPER CO., HOLYOKE, MASS.



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The Extractor of this Breaker Beater does not rely on forced feed to remove the stock from the Beater. The stock removal is controlled by a hydraulic head which can be regulated. The result is cleaner stock, thoroughly free from metal and foreign substances. All heavy foreign material is carried to the bottom of the tub allowing only clean stock to pass through extractor. No rifflers or settling troughs are required.

These beaters are quick mixers and rapid disintegrators. Costs also show reduction in steam and power consumption. The perforated extractor can be furnished separately, if desired, for existing beaters now in your mill.

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New York Office: 350 Madison Ave.
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# New York Trade Jottings

The Mitchell Paper Stock Company, of 342 West 13th street, New York, has applied for membership in the National Association of Waste Material Dealers, Inc.

* * *

Approximately sixty representatives of printing firms in New York City are visiting the Mechanicsville mill of the West Virginia Pulp and Paper Company this week as guests of that organization. Another group of sixty recently returned from a similar trip.

* * *

I. F. Baker, power division sales manager of the Westinghouse Electric International Company, with offices in New York, has been appointed European sales manager of the company and will have his headquarters at 2 Norfolk street, Strand, London, England.

* * *

The Analomink Paper Company, North Water Gap, Pa., has opened New York headquarters in Room 805, 110 West 34th street—telephone Penn. 9473—in charge of Frank H. Preble, manager of sales, who will be glad to give prompt attention to all inquiries received.

* * *

Effective July 21, the New York Central Railroad established a rate of 23 cents on waste paper, minimum 20,000 lbs., from High Bridge, Kings Bridge and Morris Heights, N. Y., and 25 cents from Brooklyn stations and New York (including lighterage) to Beaver Falls, N. Y., and on September 2 a rate of 14 cents from Oneida to Beaver Falls. Previously there were no through commodity rates in effect between these points.

* * *

The Centaur Paper Mills Supply Corporation, of 2 Lafayette street, New York, with warehouses at 491 Sackman street and 180 Watkins street, Brooklyn, N. Y., recently acquired an additional warehouse at 415 Greenpoint avenue, Brooklyn. The new addition is a one-story building, affording 40,000 square feet of floor space. The property has been equipped with a complete sprinkler system, and has waterfront facilities along the East River.

* * *

Ward R. Howard, vice-president of the Howard Paper Company, Urbana, Ohio, and the Maxwell Paper Company, Franklin, Ohio, is sailing from New York on August 23 for a European trip, aboard the North German Lloyd liner *Bremen*. During his trip he will visit Howard bond agents in Holland, Belgium, Italy and England. Mr. Howard intends to combine pleasure with business and expects to visit several other countries in addition to those already mentioned.

* * *

An acquisition to the staff of the Williams Bauer Corporation, broker in waste paper and other descriptions of papermaking supplies, of 154 Nassau street, New York, is Paul D. Bond, who was for eighteen years with the Pennsylvania Railroad, more recently as freight solicitor in the downtown district of New York and thereby widely known among paper stock packers and dealers. Mr. Bond's connection with the Williams-Bauer Corporation is in both a buying and selling capacity, and he will assist Ralph O. Williams, head of the concern.

* * *

The Wilson Paper Stock Company, of 452 West 19th street, New York, where it has a five story and basement building, plans to erect an addition directly at the rear of its present warehouse on 18th street and 10th avenue. The new structure will be four stories and basement, and will be constructed to permit the adding of two more floors later. The new building will be of concrete, of an up-to-date design, and will be equipped with a sprinkler system throughout and with all other necessary machinery and equipment for the handling of paper stock.

## Boston Paper Market Buoyant

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., August 19, 1929.—A generally satisfactory demand for paper prevails among the Boston wholesalers. It is estimated that fully as large a volume has been moving in the last week as for some time, in fact, in certain quarters there has been an increase in the call. A greater amount of business is expected in the Fall. At this time of the year collections are poor, and the present year is no exception. The demand for specialties is very good, one firm reporting it as considerably ahead of that in 1928. Prices are firm at the same levels.

More activity has developed in the box board market, a reflection of an increased amount of orders coming in to the container manufacturers. It is stated that the outlook is favorable as far as business is concerned, but price conditions are far from normal. There seems to be much hesitancy in regard to putting prices back where the trade feel that they should be in order for manufacturers to realize at least a fair profit and manufacturers' agents to receive a reasonable return.

There is practically no change in the market for old papers and rags, one dealer characterizing it as "dormant." Values are unquotably changed.

## PROPOSED TARIFF CHANGES

(*Continued from page 23*)

exportation of such products the President may enter into negotiations to secure the removal of such prohibitions or restrictions, and if they are not removed he is authorized to impose a countervailing duty of 10 per cent and in addition an amount equal to the highest export duty or other export charged by any foreign country.

## Indianapolis Paper Demand Slow

[FROM OUR REGULAR CORRESPONDENT]

INDIANAPOLIS, Ind., August 19, 1929.—Demand for nearly all kinds of paper continue slow in this territory. The fine paper demand has been off for some weeks and no indications now are evident that it will improve immediately. There are some evidences, however, that merchants in this territory are making plans for their fall openings and this should be of some help. On the whole the summer has been rather off in the fine paper demand.

Good building weather continues to create a demand for all building papers, but the volume this year will show no improvement over last year because of restricted building and weather conditions. There is a good inquiry being received now for glassines and box papers due to tobacco and candy manufacturers, who are getting ready for the holiday trade. Box makers say that judging from specifications now being received, the holiday boxing and decorations will be more ornate than ever before.

Competition continues keen in the wrapping paper field, with little profit being made by any of the trade.

## International Buys Wood Pipe Material

[FROM OUR REGULAR CORRESPONDENT]

PORTLAND, Ore., August 16, 1929.—The International Paper Company has recently completed a contract with the Federal Pipe and Tank Company, of Seattle, for 45 carloads of wood pipe material for use in building a plant in Newfoundland, according to Charles A. Paul, president of the Federal Company.

The first 20 carloads of the pipe will be shipped on the steamer Buffalo Bridge of the Nelson Steamship Company, loading now at the Ballard plant of the Federal Pipe and Tank Company. The remaining 25 carloads will be sent on the next two ships.

## E. B. Mendsen Dead

E. B. Mendsen, connected for many years with the paper industry of Wisconsin and Michigan, passed away July 31, after a short illness, at his home in Winter Park, Fla.

# THE WAGNER FURNACE

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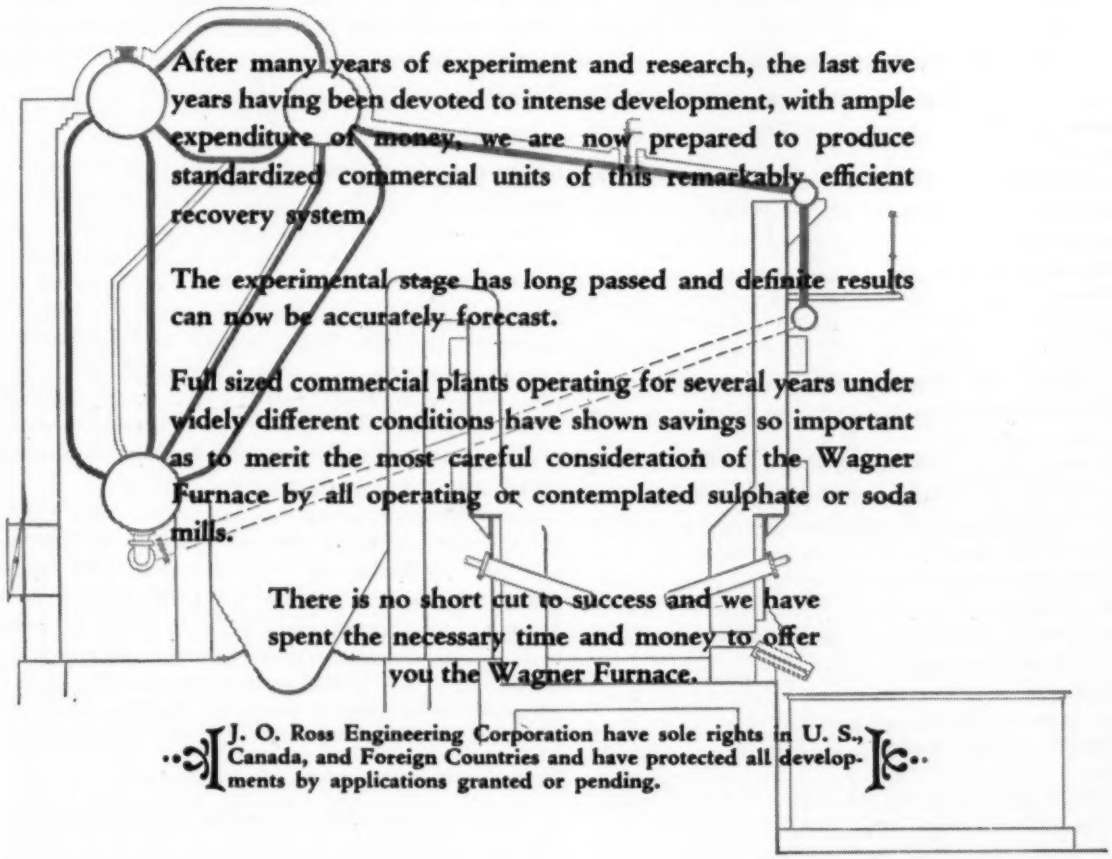

After many years of experiment and research, the last five years having been devoted to intense development, with ample expenditure of money, we are now prepared to produce standardized commercial units of this remarkably efficient recovery system.

The experimental stage has long passed and definite results can now be accurately forecast.

Full sized commercial plants operating for several years under widely different conditions have shown savings so important as to merit the most careful consideration of the Wagner Furnace by all operating or contemplated sulphate or soda mills.

There is no short cut to success and we have spent the necessary time and money to offer you the Wagner Furnace.

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Vol. LXXXIX, New York, August 22, 1929 No. 8

## SUGGESTIONS FOR CENSUS

With a view to making the forthcoming census of manufactures as responsive as possible to the need of industry for accurate information concerning its own activities, the special advisory committee designated by Secretary Lamont has requested manufacturing organizations, trade associations, and individual manufacturers for advice and suggestions as to the form of the schedule to be used in the enumeration.

The subjects covered by the schedule used in the 1927 census are: Description of establishment; character of industry; time in operation; persons engaged; salaries, wages, and materials; products; power; coal consumed. The committee has invited suggestions concerning the form of questions under all of these subjects except production, which will be taken up directly by the Bureau of the Census with the industrial associations.

In view of the fact that it will be necessary to begin the printing of the general schedule early next month, comments on the general schedule should be sent to the Secretary of the Committee, Thomas W. Howard, 1615 H street, Northwest, Washington, D. C., as promptly as possible in order that they may be given consideration by the committee preparatory to recommending the revision of the schedule.

In a statement concerning the manufacturing census, L. S. Horner, president of the Niles-Bement-Pond Company, chairman of the committee and a director of the Chamber of Commerce of the United States said:

"For the first time industry itself has been called into consultation to shape the stupendous task of taking the census of manufacturers. Upon industry itself will rest very largely responsibility for the outcome.

"In order that the census may be as comprehensive as possible, that essential and valuable information may be obtained and statistical data of the utmost practical use to manufacturers themselves be compiled, Secretary Lamont has requested a representative committee to submit recommendations concerning the revision of the schedule used in making the enumeration.

"To accomplish this purpose the committee desires the widest possible expression of opinion on the part of manufacturers themselves as to the questions to be formulated, the practicability of supplying the information desired, and the scope of the census. Its aim is to suggest the character of information which will be helpful to industry in meeting larger problems of production and distribution with which it is confronted in shaping production and sales policies. The committee solicits advice and suggestions from individual manufacturers, business organizations, and trade associations, to the end that the recommendations made will represent the consensus of business itself.

"The time for doing this is short, as it will be necessary to begin the printing of the schedules well in advance of the enumeration. For this reason the committee is asking that suggestions be sent to it at once."

## IMPORT PAPER CASES

The United States Customs Court has decided a test case involving the dutiability of decorated hand made paper under which several hundred protests are pending before the court. Justice Fischer in his decision holds that although the lined effect produced in the paper is part of the paper making process, it is still a decoration within the intent of the law, and he has therefore held the paper to be subject to an additional 10 per cent duty. The paper was imported from Italy, and the Import Committee of the American Paper Industry considers the decision of the greatest importance as it construes decoration of writing papers to be not necessarily a secondary process by special equipment.

The Federal Trade Commission has announced that a corporation selling and distributing foreign and domestic papers caused its name to be featured in its price list with the words. "Manufacturer and mill agent." Also the advertising included the words, "This is printed on Cockle Rag Onion-Skin paper, our own manufacture." The fact was, says the Federal Trade Commission, that the corporation did not own or operate a mill and has now signed a stipulation agreeing to desist from these misrepresentations. The action was taken because of a complaint filed at the instance of the Import Committee of the American Paper Industry.

A case pending in Cleveland is an example of the manner in which foreign exchange is manipulated to give the importer an opportunity to the payment of proper duties. The shipment was of paper squares used for the manufacture of artificial flowers and sensitized barometric dolls. In making the computation for charges and home market value the importer used two exchange rates, one of 47½ cents, the other of 44.8 cents. By this use of two exchange conversion rates the importer, according to the Government's claim, entered his goods at about 6 percent below the true value.

## DISCONTINUES PAPER TEXTILES

The use of paper textiles in Germany has practically ceased, according to a report to the Department of Commerce from Assistant Trade Commissioner A. Douglas Cook, Berlin. During the period of the war considerable quantities of woven goods were manufactured, using paper yarn for both the warp and weft, but the use of this material was abandoned shortly after the cessation of hostilities. The nearest approach to this product in use in Germany at present are shirt fronts and collars made of pressed paper, either with or without a cotton cloth backing.

There are but two concerns in Germany now manufacturing paper yarns suitable for this purpose; one of these manufactures a product from sodium cellulose, known as "zellulongern." These

paper and cellulose yarns are used in only a few cloth manufacturing industries and a few carpet factories in the Gera district. Colored paper yarns are used in colored wall decoration materials, and elastic band weaving mills use fine paper and cellulose yarns as a filling, as do the cable manufacturing industry for covering and filling cables. Other buyers are the gold and silver spinning mills, the trimmings industry, and manufacturers of artificial flowers. Heavier yarn, spun from kraft paper, is sold as paper string. The wicker furniture industry uses quantities of firmly twisted paper cordage in the manufacture of its product.

## United Paperboard Shows Loss

The United Paperboard Company, Inc., for the year ended May 25, 1929, shows net loss of $104,695 after depreciation, etc. This compares with net profit of $304,963, or $1.88 a share earned on 120,000 shares of common stock in the preceding year after 6 per cent preferred dividends.

In submitting the report Sidney Mitchell, president of the company, says:

"Your board of directors submits herewith the annual report of the earnings and financial condition of the United Paperboard Company for its fiscal year ending May 25, 1929.

"Competition was very keen. Prices for our products demoralized during the last half year, and the company operated at a loss.

"The largest use for paperboard is in the manufacture of solid and corrugated containers. The company has a capacity of over 250 tons per day, which could be devoted to the manufacture of test liners for corrugated containers and has done a large business on this grade. Recently mills have been built on the Pacific Coast and in the South. These mills make their own Kraft Pulp and manufacture it into a sheet of board which is considerably lighter and stronger than the test liners we make. This has made it not only impossible for us to compete at a profit, but has seriously reduced our sales of test liner board and makes it necessary for us to operate on short time or find other grades to run on.

"We have a capacity of 200 tons of straw paper per day, which is used by corrugated container manufacturers. In the last year or so there have been several mills built in the South to use the chestnut wood waste from tannic acid plants. This paper is a little stiffer and harder than our regular straw paper and besides the business we have lost we have been obliged, in order to meet competition, to change our process of cooking straw, necessitating the use of chemicals, increasing our cost and reducing the volume of our output. However, we feel that the straw paper we are now making is fully equal in quality to the chestnut paper.

"The sale of water power rights at Lockport (N. Y.) resulted in a capital gain of $70,320.00, which is reflected in earnings.

"Mill improvements have resulted in some economy in the cost of manufacture, as well as increased capacity.

"There are 850 stockholders, of whom 126 are employees and members of their families and former employees.

"Your board of directors and officers appreciate the loyalty and cooperation of the employees of the company during a very difficult year."

## Memorial to William R. Crump

Paul E. Vernon, who has just returned from abroad, tells the PAPER TRADE JOURNAL that on the request of an interested group he arranged for the execution of a base relief of the late William R. Crump, in bronze with a green marble border, by one of the great artists of France.

This memorial of the Martin Cantine Company's well-known and honored representative is to be erected with appropriate ceremonies in the Reception Hall of the mill at Saugerties, N. Y.

Details for the ceremonies are being arranged by Stanley O. Styles of the Martin Cantine Company and Michael Pomerance of the Forest Paper Company is treasurer of the fund.

## Aetna Paper Co. Makes Improvements

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, Ohio, August 19, 1929.—Satisfactory progress is being made in the rebuilding of one of the Fourdrinier machines in the plant of the Aetna Paper Company in this city.

The project, which with associated improvements, will involve an expenditure of $500,000, is approximately half-completed and indications are the improvement will be finished in the near future. However, the company is installing the improvements "on the run," as it were, as there has been no interference with operations of the plant, which is running full time on a good number of orders.

In order to make the necessary additions to the machine, it was necessary to erect a large building to put on the necessary length of Fourdrinier and additional drying equipment. This part of the work has been completed.

The structure has been erected and the dryers are in position. In making this addition to the buildings of the main plant, additional expense was entailed in adding increased storage facilities for the finished product which will permit the carrying of a heavy stock at the mill.

The power plant is to be rebuilt and work on this feature of the improvement has just been started. It is expected it will be pushed to completion at the earliest possible date. The company is installing the extraction type turbo generator and motorizing a large part of the plant.

Large contracts involving the purchase of necessary equipment were placed with Pusey & Jones Corporation, builders of paper machines; the Paper and Textile Machinery Company, and E. D. Jones & Sons.

Suction roll and rotary screens and various other items essential to making the Aetna one of the most modern mills manufacturing rag content papers in the country, will be installed.

A considerable expenditure resulted in the beating room in increasing beating room facilities together with new Jordans.

The buildings have been completed and the work of installing the various improvements in the way of new machinery, and in making the necessary alterations, is proceeding at a good rate of progress.

The improvement means the complete rebuilding in every particular of one of the company's Fourdrinier machines and increased production. The mill produces loft-dried bonds, ledgers, and linens. Col. Maxwell Howard is president of the company.

## International Reports Increased Earnings

The International Paper and Power Company and subsidiaries for the quarter ended June 30, 1929, report net income of $927,641 after depreciation, amortization, interest, Federal taxes, subsidiary dividends and minority interest, equivalent to $1.02 a share earned on 905,640 shares of 7 per cent preferred stock outstanding at the end of the quarter. This compares with $480,423 in the preceding quarter, or 53 cents a share on 904,002 shares of 7 per cent preferred stock then outstanding.

Net income for the first six months of 1929 totaled $1,408,064 after above charges, equal to $1.55 a share on 905,640 shares of 7 per cent preferred stock. Above earnings for six months do not include the undistributed portion of the earnings accruing prior to April 1, 1929, on the common shares of New England Power Association held by the International Paper Company.

## Geo. W. Knowlton 90 Years Old

WATERTOWN, N. Y., August 19, 1929.—George W. Knowlton, president of the Knowlton Brothers Paper Company, was the recipient of many congratulations from his friends this week on the observance of his 90th birthday. He entered the paper industry when but sixteen years of age and six years later when his father retired from business he took over the business with his brother, the late John C. Knowlton, as a partner. It is interesting to note that after 74 years of service he is still an active figure in conducting the affairs of the growing business.

# UNIFORMITY

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AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.

Edited by
RONALD G. MACDONALD, Secretary

# A New Gum Coating Machine

Arthur B. Green[1]

To apply a coating to one side of a fabric and then to dry it presents a problem of long standing. If the coating partly penetrates the fabric, and if there is a difference as to shrinkage on drying, curling and cockling come in as serious difficulties. That is the case in the coating of paper with glue.

As a first step in making gummed kraft sealing tape, paper in wide rolls is coated with a glue solution and dried. The design and construction of the machine for doing that is the major engineering problem. Up to within a few years there have been two types of machines used, differing in their drying part, not in the gumming itself.

First, there was the festoon drier. The paper received its coat on one side and was taken up on sticks, which supported it at intervals and moved at a speed timed to give it long exposure to hot air in a drying room. There was no provision for overcoming shrinkage except at the points where the paper was borne on the sticks; hence the trouble with stick-marks, a drawback to quality. There was no way to prevent the folds or festoons from swinging into contact with each other and sticking, except by moving the hot air at very slow, quiet, speeds, a serious limit on drying efficiency. The room could not be closed, because men had to be inside frequently, a considerable loss in heat. Temperatures had to be limited to what a man might stand, lowering the speed of drying. In hot weather there were prostrations because men were exposed to hot and very humid air.

[1] Member TAPPI; Consulting Engineer, Portland, Ore.

### The Crowell Drier

Secondly, there was the Crowell type of dryer. The paper was not released from tension, but was tight at all points, counteracting quite effectively the tendency to shrink and curl. As the paper came from the gumming head, it passed through a path that might be described as a spiral, or open coil, starting at the outside and in two or three revolutions coming toward the center, where it was rewound. This delivered the coated paper at a point well above the manufacturing floor and out of sight from the gumming head. To carry the paper in this path there was a series of carrying rolls numbering some fifty or more, supported from the inside of the dryer chamber walls. Since no cross-bracing could be put inside the housing the structure was far from rigid. Since every roll had to be speeded to agree with the paper speed, each had a separate sprocket chain drive, resulting in a very complex system all inside the drier housing. Beside the difficulty of keeping the carrying rolls in alignment, there was the added trouble from jumping chains which frequently threw one or more of the rolls out of line by bending the spindle. In order to care for all these contingencies, the dryer housing had to have many small doors, and it was customary to make these in sash with glass, poor provision for keeping the heat inside.

In the Crowell type of drier, to get the end over in starting, there was a rope passed through on the carrying rolls following the path of the paper. The end of the paper was secured by a

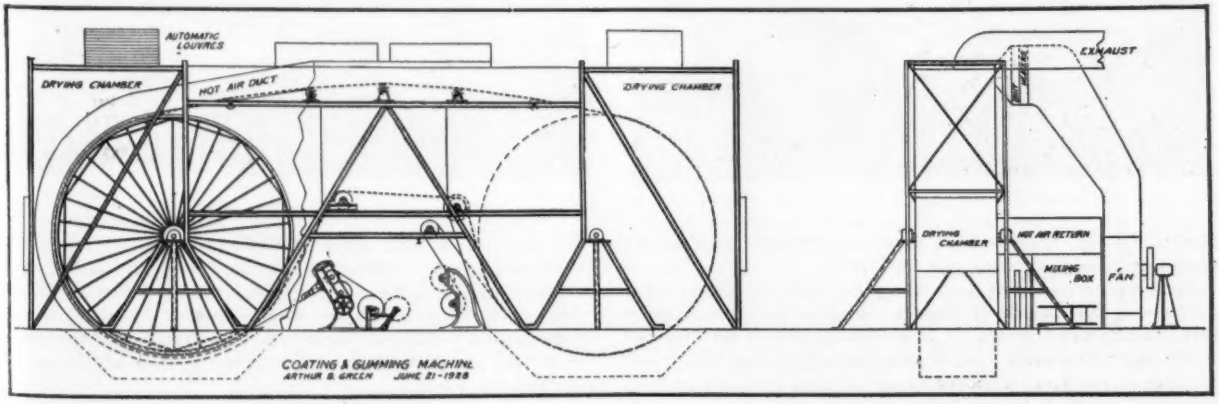



FIG. 1

bridle to this rope, the machine run at threading speed, the rope hauled through hand over hand, until the paper was reached and struck on the rewinder core. When the paper was successfully threaded, the machine was kept still at low speed while the rope was in turn threaded through led by the paper. Then the rope was made fast at the unwinder end, allowed to slide on the carrying rolls, until again needed. This procedure had to be repeated for each break in the paper during the day's work.

Many if not all of these disadvantages have impressed themselves on designers with the result that present-day machines for the most part show the effort to improve on the Crowell type. If the paper is held under tension, it still will curl at the edges unless it is bent backward away from the gummed side. The open coil developed in the Crowell drier makes provision for that. But the same provision could be made by using a single loop, or by the double loop, as illustrated in Fig. 1. In either case the machine would have one distinct advantage over the Crowell type in bringing the finish end back to the starting point, allowing all the adjustments and control to be handled from one station. That advantage, as applied to the double loop principle is well set forth by the photograph, Fig. 2.

**Drive Rigidity and Simplicity**

How to carry the paper over the loop, whether single or double, presents a mechanical problem. If carrying rolls are used, as has been done usually, then the loop principle has all the lack of rigidity, all the complication of drive, all the necessity for getting inside the housing, that characterizes the Crowell design. Complete rigidity, and simplicity of drive, are attained by carrying the paper over large wheels. Those shown in Fig. 1 are twenty feet in diameter. They represent, so far as the writer knows, a new feature in this class of machinery. These wheels set on tripod supports, supported in turn on ample concrete foundations, give a mechanism free from sway, true in running, smooth in starting and stopping. That having been accomplished, there is no necessity for getting inside the dryer housing except possibly in case of a break in the paper. Since the hot air system acts, as will be mentioned in a moment, to carry the end over automatically after a break, there is nothing to prevent enclosing the dryer with a highly insulated, uninterrupted, tight, construction, affording the maximum thermal efficiency for the dryer.

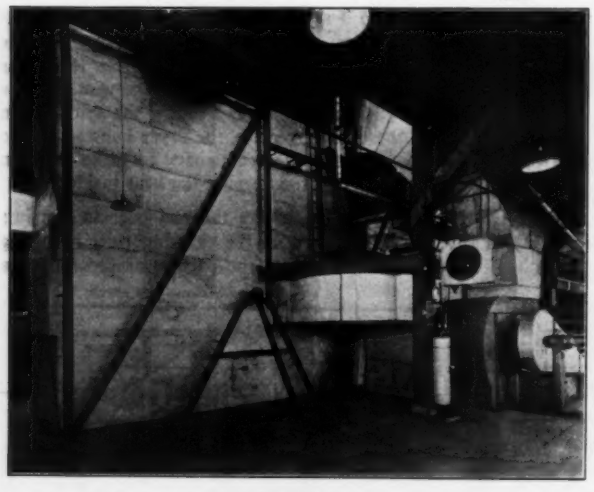


FIG. 3

Passing over these two large wheels is a pair of endless roller chains, one on each side of the web, connected across by straight bars spaced about 9 inches. A short rope connected with the end of the paper by a bridle, and passing around the new parent roll of paper a few turns, is hooked to one of these bars, the machine is started, the hook is snatched as it emerges at the other end, the paper is struck on the rewinder core. This is the procedure for starting. In case of a break, the high-velocity hot air delivered from the ducts, which conform with the wheels, drives the paper in between the bars once it becomes slack, thus bringing the end automatically through again. The simplicity of the mechanism and the smoothness of its running, however, combine to make breaks very rare. The conveyor system consisting of the two chains and their connecting bars was the suggestion of Mr. James W. Duvall. Applied at the periphery of the wheels, these chains provide the easiest method of driving the wheels, thus serving a double purpose.

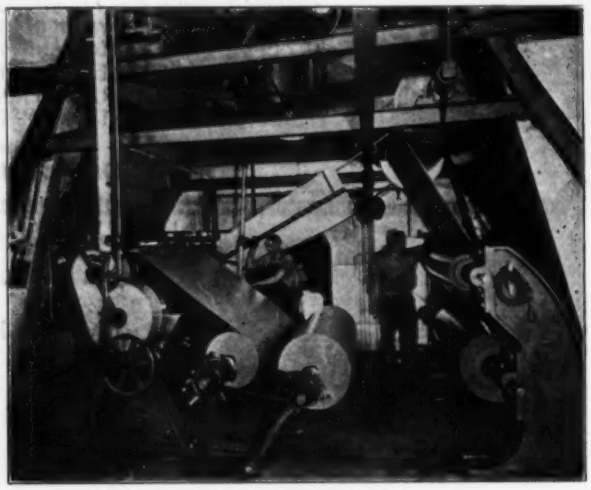


FIG. 2

Up to the time that these twenty-foot wheels were built and put into operation under these varying temperatures, it could not be certain that large wheels provided with the conveyor system would continue to run true at all times. There was only the certainty that they formed a far simpler design than any of the older designs, one that could be readily adjusted in case it got out of alignment. Experience covering more than six months of steady operation, however, has established the fact that such wheels could be built even larger if necessary with no structural or mechanical difficulty. Even the chains run without needing the take-up, except on those rare occasions when wear has caused the chains to stretch.

FIG. 4

**Air Handling System**

The air system was supplied by the Carrier Engineering Corpo-

ration. From the fan, Fig. 1 and 3, the air is driven upward through a dividing duct. One branch goes around one of the wheels, the other around the other. Just before the air reaches the dryer housing it passes through a bank of Aerofin heaters designed to run on 100-pound steam pressure. From the curved ducts reaching around the wheels, the air discharges through lip nozzles at high velocity directly on the gummed side of the paper. As an added provision against curling at the edges, the ducts have auxiliary nozzles reaching past the edges of the paper and discharging on the under side, to equalize distribution of drying air.

From the two halves of the drying chamber the air is collected in a return duct and taken back to the mixing box, Figs. 1 and 3, to be once more passed through the fan. At the sides of the mixing box are sliding doors for admitting room air. For every cubic foot of room air admitted, a corresponding cubic foot of saturated air is discharged throught flapper louvres at the top, Fig. 1, and on to the outside of the building. Thus is regulated the degree of recirculation. At the top of the dryer housing are thermal regulators, adjustable to any desired temperature, controlling the admission of steam to the Aerofin heaters. At 200 degrees Fahrenheit inside the chamber, the system is capable of removing from the paper 900 pounds of moisture per hour, corresponding in 60-pound gummed paper 65 inches wide to a speed of 600 feet per minute.

Only two features of importance were incorporated in the glue cooking equipment, large kettles, and gravity delivery to the gumming head controllable by the operator. The kettles are three in number and hold 150 gallons each. (Fig. 4.)

As compared with former designs, this machine presents two disadvantages. A minor one is the passing of paper over the cooling roll gummed side in. If the machine did not run extremely true, the paper would weave on the cooling drum enough to wet the edges in the condensate which gathers outside the edges. True running, and convenience to the operator, eliminate that difficulty altogether in practice. Overcondensation on the shoulders of the cooling roll cannot be detected or controlled where the cooling roll is remote from the operator and out of sight from the gumming head. But overcondensation can be watched and controlled in the double loop machine where the cooling roll is in plain sight of the operator at all times, and the valve admitting cold water is at hand.

Somewhat more important is the necessity for the operator to bend over and look under the paper to see the coat as it leaves the gumming head. To minimize that, the gumming head was built on a sixty-degree slant, allowing more room for this inspection. But with all the controls at one station, where the operator can watch tension and glue distribution at once, there is less necessity for watching the coat as it comes from the gumming head.

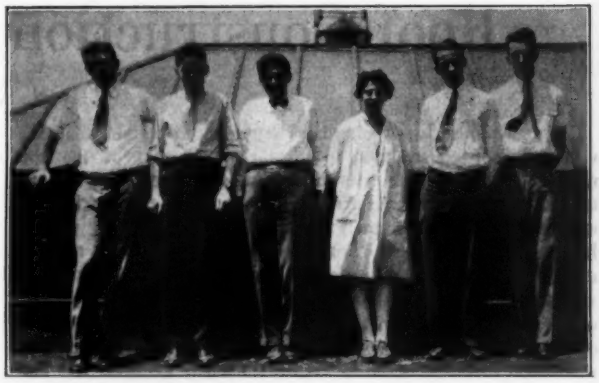
This machine was designed as part of a plant to supply a market which if properly sold should call for approximately 300 tons of gummed kraft sealing tape per month. The plant should pay out at about half that production. As the population increases, and the use of this commodity grows, there will be no need of further gumming equipment so far as can be foreseen, since the machine when run up to designed speeds continuously will produce about 740 tons per month without alteration or addition, except to care for spatter at the gumming head with guards or baffles. There are apparently patentable features in the machine which are being protected by the designer.

## Woolen Paper Machine Felts and Algae

Special Inquiry No. 127

A member writes: "We would like to know the experience that others have had with felts during hot weather, when the water is warm and becomes filled with fine vegetable matter (algae); how it affects the life of felts, and if adversely, have they any remedy to overcome this difficulty?"

Those responding to this inquiry will receive a transcript in blank, of all replies received. Send replies to Secretary.



Staff of Research Dept., Oxford Paper Co., Brooklyn

**Left to right: Jim Macauley, Ray Macauley, Bill Willets, Miss Zelenko, Carl Schaab and Henry Rimbach. Picture taken by D. E. Cable, assistant director of the Oxford Paper Company, Research Dept. Messrs. Cable and Willets are members of TAPPI and Jim Macauley and Henry Rimbach have recently applied for membership.**

## Corrosion of Stuff Preparation Equipment

Special Inquiry No. 128

A member writes: "We are experiencing considerable corrosion trouble with cast iron equipment handling our paper stuff. Our jordans, pumps, beater rolls, etc., are slowly but surely disintegrating by the graphitic softening of cast iron parts. The iron dissolves and leaves a weak, porous, graphitic skeleton which readily crumbles and gets into our sheet.

"Book stock is being handled and consists of a ground wood, white and clay mixture. The pH concentration varies from 3.8 to 4.4. The materials of construction include gray iron castings, rolled phosphor bronze beater bars and jordan knives, and bronze pump impellers.

"We would like to know what other mills are doing to minimize this trouble. Bronze or stainless steel castings are satisfactory but are too costly. We understand that white cast iron rather than gray cast iron is employed abroad. Have any American mills used white cast iron?"

Responses to this inquiry will be compiled into a special report and all those replying will receive a transcript in blank of the contributions received. Send replies to Secretary of TAPPI, 18 East 41st street, New York, N. Y.

## Paint for Sulphite Mill Interior

Special Inquiry No. 129

A member writes: "We would like to find out what the most suitable paint is for the walls, piping, tanks, digesters, etc., of a sulphite mill."

Answers to this inquiry should include a copy of any paint specifications used and give the analyses of paints. All those contributing to this special report will receive a copy of the transcripts, in blank, when issued. Send replies to Secretary, TAPPI, 18 E. 41st street, New York, N. Y.

## Keystone Chemical Corp. Expands

[from our regular correspondent]

Glenfield, N. Y., August 19, 1929.—The development of the Keystone Chemical Corporation has been remarkable in recent months and the firm is now employing several hundred workers. The corporation in its expansion program is spending a large sum and it is understood that several years will be required in bringing the work to completion. Among the projects launched is the laying of a considerable stretch of railroad which will allow the company better facilities for lumbering large tracts in Lewis County. The concern is also aiding in the building of new homes for its employees and otherwise doing all it possibly can in the upbuilding of this section. The company owns several of the finest timber tracts in Northern New York.

# Roof Construction For Paper Mills*

By N. S. Perkins[1]

For many years paper mills have experienced certain difficulties with the roof construction, particularly that part of the roof over the machine room. In this room, steam-heated drums are used to dry the paper. As a result, the air in the room is likely to become warm and extremely moist. As this moist air rises to the top of the room and comes in contact with the roof, its temperature falls in proportion to that of the underside of the roof structure. When the air has been cooled to a temperature below its dew point, part of the moisture in it is condensed, usually gathering on trusses, purlins, or the roof material. A small drop in temperature is usually sufficient to cause this condensation.

In cold weather, the under side of the roof may be cool enough to cause condensation. In more moderate weather, condensation may be absent on the under surface of the roof, but the moist, warm air may penetrate between the roof planks or strips and reach a cool zone of condensation within the roof itself, either at the tongue and groove or splined connection between planks or else at the upper surface of the roof boards, underneath the finish roofing. Wherever such condensation occurs, it provides a constant source of water supply for fungus or decay growth, and as the other two requisites for decay are present, i. e. warmth and air, it is not surprising that many roofs of untreated wood have developed rot. A survey conducted by the Canadian Forest Products Laboratory about ten years ago showed that the average life of a paper mill roof, except where proper precautions had been taken against decay, was from eight to ten years.

Under ideal conditions the machine room of a paper mill presumably would be so ventilated that moisture-saturated air would be removed before it came into contact with the roof, also the mill might be adequately heated so that the under-surface of the roof would be well above ordinary condensation temperatures. Unfortunately, ventilation systems do not always perform up to their theoretical capacities, and extremes of cold weather sometimes defeat the best designed heating plants. The builder of a paper mill must look forward to a certain amount of condensation incident to the occupancy and must provide against it.

Various types of roof construction have been tried to prevent condensation. Many of these attempts have failed and in every instance the failure can be traced to the same bad feature; namely, the entrance of moist air into the spaces between planks, through which it finally reaches a cool zone at or near the upper side of the roof, and deposits moisture.

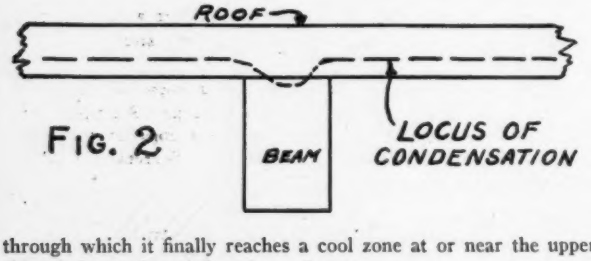


FIG. 2

Roof boards and planks of varying thicknesses up to 5 inches have been used in some instances. Other builders have employed a laminated type of roofing, spiking 2 inches by 3 inches or even 2 inches by 6 inches planks together on edge. Sheathing has been added in some cases, both with and without an air space between the roof boards and the sheathing. Then experiments have been made with tongued and grooved roofing, with splined plank and also with square edged boards. Yet in each different type of roof construction, some failures have been experienced. None of these variations entirely avoids the difficulties already mentioned.

But these difficulties can be eliminated, and apparently in quite a simple fashion. First, if a permanently waterproof layer is installed near the under surface of the roof structure, moisture cannot penetrate beyond this barrier. Next, if sufficient insulating materials (and 2 or 3 inches of wood is excellent for this purpose) is placed on top so that any moist air in contact with the under side of the waterproofing cannot be cooled to a condensation point, the problem is solved.

A type of roof construction which has been found effective is shown in Fig. 1. This roof construction will be seen to consist of

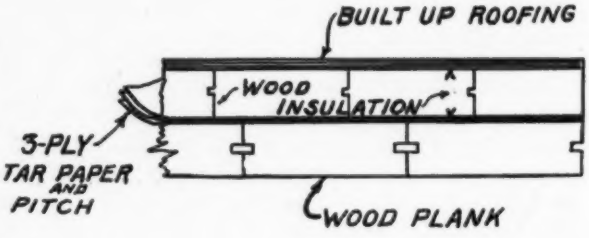


FIG. 1

four layers. Looking from the inside outward, there is a lumber ceiling of strips or boards followed by one of waterproof material. Over this is placed the insulation necessary to prevent the underside of the roof from cooling off to a condensation temperature, and, finally, the built-up weather-proofed roofing with which any good industrial building should be protected. These will be discussed briefly in order.

### Wood Ceiling

This is the layer which carries the weight of the roof material under any wind loads, snow loads and any other added weight which may be imposed. If the roof is supported by trusses, the roof plank will usually be had over purlins. Sometimes short trusses or beam supports are spaced sufficiently close to dispense with purlins. In such cases a 1⅝ inches (2 inches nominal) Southern pine or Douglas fir plank will permit of 8 feet 9 inches span between supports, and a 2⅝ inches plank is good for 13 feet 8 inches using only a 1200 pound fiber stress. It should be remembered in this connection that while the wood insulation making up the third layer is not primarily for load supporting purposes, it does contribute very materially to the strength of the roof structure.

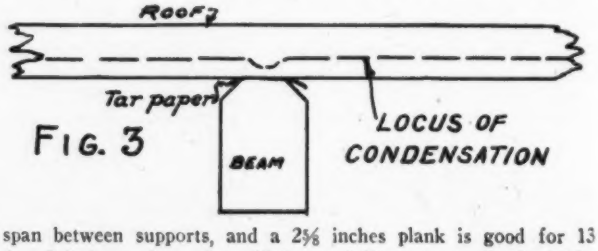


FIG. 3

With proper construction for the remainder of the roof, there should be no condensation in this lower layer of boards or planks. Nevertheless, it is undoubtedly sound practice to use treated lumber for this under surface. Zinc chloride, which is being used in a number of mills, is excellently suited for the purpose. It is toxic to all decay germs or fungus growths as well as insects. Moreover, it is colorless and can be painted white or any other

* Contribution of R. S. Kellogg, Secretary of the News Print Service Bureau, New York.

[1] Construction Engineer, National Lumber Manufacturers Association.

shade desired. Wood treated with this salt in accordance with specifications of the American Wood Preservers' Association should last for many years, as long as the building itself, in fact. The cost is reasonable for this type of treatment, usually ranging from $15 to $20 per thousand board feet in addition to the cost of the lumber.

Some of the extra cost thus involved is offset by the fact that a cheaper grade of lumber containing a large percentage of sapwood can be substituted for the heartwood which is particularly desirable in untreated material. Sapwood as a rule lends itself much more readily than heartwood to preservative treatment and can often be purchased for less.

Over a long period the extra life obtained by treating the lumber with a preservative will repay this slight extra cost several times over. When a mill roof fails through decay, not only is it necessary to replace the material and meet the labor cost of another installation, but a new layer of finish roofing material must also be put on, though the old one may still be good for many years service. Assuming that the roof plank for a given structure cost $40 per thousand feet untreated and $55 per thousand feet treated as indicated above, and that a substantially equal labor cost of $15 per thousand for installation is involved in either case, the additional cost of the treated roof material will be only 27 per cent. This does not take account of the waterproof layer or the finish roofing.

If the life of untreated roof plank is taken as 10 years, and that of treated lumber is taken even as low as 20 years, a large saving in annual cost may be effected by using treated material.

For example, assume a roof area of 20,000 square feet, with first a 1⅝ inches untreated lumber roof, and with a waterproof layer of tar paper and pitch, 2 inches of wood insulation (untreated) and a 5-ply built-up roof.

| | | | |
|---|---|---|---|
| **Untreated** | | | |
| Roof plank—45 M bd. ft. @ $55 | $2,475 | | |
| Waterproof layer—200 sqs. @ $4 | 800 | | |
| Wood insulation—45 M bd. ft. @ $55 | 2,475 | | |
| 5 ply roofing—200 sqs. @ $7 | 1,400 | | |
| Total Cost | $7,150 | | |
| **Annual Charges 10 year period** | | | |
| Interest—$7,150 @ 6% | $ 429 | | |
| Amortization cost per yr. @ 4% | 650 | | |
| Annual Cost | $1,079 | × 10 = | $10,790 for 10 yrs. |
| Removal of old roof | | | 2,000 * |
| | | | $12,790 |
| | | | or $1,279 a year. |
| **Treated** | | | |
| 45 M bd. ft. @ $70 | $3,150 | | |
| Waterproof layer | 800 | | |
| Wood insulation—45 M bd. ft. @ $55 | 2,475 | | |
| 5 ply roofing | 1,400 | | |
| Total Cost | $7,825 | | |
| **Annual Charges 20 year period** | | | |
| Interest $7,825 @ 6% | $469.50 | | |
| Amortization charge each year (4%) | 263.00 | | |
| | $732.50 | × 20 = | $14,650 for 20 yrs. |
| | | | 2,000 * |
| | | | $16,650 |
| | | | or $832.50 a year. |

* Includes cost of interruption to manufacturing process.

This shows a saving each year, disregarding maintenance, of over $400, or more than 35 per cent, by using treated planks for the roof.

Several commercial preparations are available for the impervious layer which must prevent any moisture in the air from passing to the upper and cooler side of the roof. Three sheets of tar paper, well mopped with pitch may be used.

### Insulation

The insulating material should be chosen after consideration of its insulating properties, its cost, and its rigidity so that the top roofing will have a firm unyielding base. Otherwise, occasional walking over the roof will be apt to cause depressions or cracking.

Wood is particularly suitable for this insulating course, if the lighter species are used. Its cost is low compared to that of the so-called insulating boards, and lumber presents a firm base for the final roofing. Moreover, and this is of more than merely casual significance, treated wood is not damaged by leaks in the finished roofing. Such leaks should not occur but they are not unknown just the same. Many of the materials which are good only as insulators, lose their insulating values if wetted and the result is worse than if no insulation had been used. Wood, if it has been treated, will not be seriously affected by water leaking on to it, nor will its insulating properties be greatly impaired.

Wood is a natural insulating material, and is, in fact, a far better one than commonly realized. In the past the rate of heat loss through wood has been taken as 1.00 per inch thickness, in comparison to that of various wall boards, etc., which are from 0.33 up to 0.40 for a 1-inch thickness or about 0.75 for 7/16" stock of commercial thickness. A series of recent experiments not yet complete, indicate that, although 1.00 is correct for the conductivity of dense, heavy structure woods, it is far too high for the lighter woods. This is quite logical. Lighter woods are lighter because they have less wood structure and more or larger air cells. It has been found that .70 is a fair figure for the conductivity of light weight woods, .80 for medium weight, and 1.00 for heavy. One inch of wood, therefore, is about as effective as the usual 7/16 inch commercial thickness of so-called insulating board, the former having a heat resistance of 1.43 while the latter has about 1.33 to 1.47. It is true that a nominal inch of wood has an actual thickness commercially of only 25/32 inch or, in the case of 2 inches, the commercial thickness is 1⅝ inches. As these thicknesses are increased, however, the addition amounts to a full inch of wood, 3 inch nominal being 2⅝ inch thick, and 4 inch plank being 3⅝ inch thick.

The thickness of wood insulation to be used over the waterproof layer will depend on the expected normal temperature and moisture conditions in the machine room, the local climatic conditions and temperature extremes. Condensation is much more easily prevented when the outside temperature is 30 degrees or more than when it drops to zero. A competent heating and ventilating engineer should be consulted before decision is made. The following three examples illustrate the thicknesses necessary under a wide range of conditions:

(Based on ½ inch thickness of built-up roof, heat resistance = 0.4)

| Room temperature | Minimum outside temperature | Inside humidity | Thickness of wood insulation needed under built-up roof to prevent condensation |
|---|---|---|---|
| 80 deg. F. | 20 deg. F. | 70 per cent | 2⅝ inches |
| 70 deg. F. | 10 deg. F. | 50 per cent | 1⅝ inches |
| 70 deg. F. | —10 deg. F. | 70 per cent | 3⅝ inches |
| 70 deg. F. | —10 deg. F. | 50 per cent | 1⅝ inches |

The final roofing is a matter of choice and price. A number of good built-up roofings are on the market. They must be laid carefully and be permanently waterproof.

The general scheme of construction previously described has been applied in repairing roofs in which decay has started. Over the old roof is placed a layer of waterproofing. Furring strips (1" square, nominal dimension) are placed at intervals on this waterproofing and a new treated wood roof laid over the furring. This aims at removing water supply from the decay in the old roof, and so checking further deterioration.

Another remedy has been used where the rafters or truss members supporting the roof planks have shown signs of decay. Decay in these members means that the locus of condensation has come down out of the plank into the purlin (See Fig. 2). By chamfering the supporting members as shown in Fig. 3, the locus is raised again. Inserting a strip of waterproof paper as indicated serves also to keep the tops of the beams dry.

### General

Paper mill roofs in general should have a flat pitch, for then the under surface can best be heated uniformly. Also a flat roof takes less material in construction and offers a smaller surface for heat losses than a steeply pitched roof. The use of purlins between trusses to support the roof deck is not satisfactory for paper mills. It presents additional surface for condensation and makes it difficult to carry warm moist air away from the ceiling.

# Multiple Motor Winder Drive

By S. A. Staege[1]

The winding of firm, uniform rolls is becoming more and more necessary as competition increases and customer's demands become more exacting. Rolls wound too hard or too soft or with hard and soft spots are not tolerated and rejections are more alarming.

Winder conventional methods in the past it has been difficult if not impossible to entirely overcome these troubles as there have been no accurate methods of determining whether the winding conditions were exactly right and it has been impracticable to secure correct and continuous manipulation of the mechanical devices to secure uniform winding.

To overcome these difficulties and shortcomings the Westinghouse Company some years ago conceived the idea of using an individual electric motor for driving each winder drum, with suitable electrical characteristics and control means to automatically provide the ideal winding conditions for all paper speeds and all diameters of roll. This to be accomplished without attention or manipulation on the part of the operator to obtain these ideal results. To this end, suitable individual electric motors were applied to each of the drums of a four drum winder operating on book paper and the idea was proved to be correct and the principles right. It was shown in these tests that proper control of the relative speeds and torques of the winder drums could be obtained automatically without dependence upon the operator. The full and complete development of all of the details of this method and system of drive was of course, the subject of a great deal of painstaking study and investigation to determine just what conditions are necessary for the proper winding of the roll and to adequately and fully meet those conditions and requirements.

In a familiar type of winder, which has been in use for many years, the several drums are provided with cone pulleys and belts which can be shifted on the cone pulleys to give varying relative speeds of the drum. Experience has shown that when starting to roll on the empty core, the winding drum will have to operate slightly faster than the other drums in order to wind the paper tightly but as the roll increases in diameter and weight, the traction becomes greater between the paper roll and the winding drum and an increasingly smaller difference in speed is necessary as the roll increases in size until there is practically no measurable difference in speed between the drums when the roll has acquired its maximum diameter.

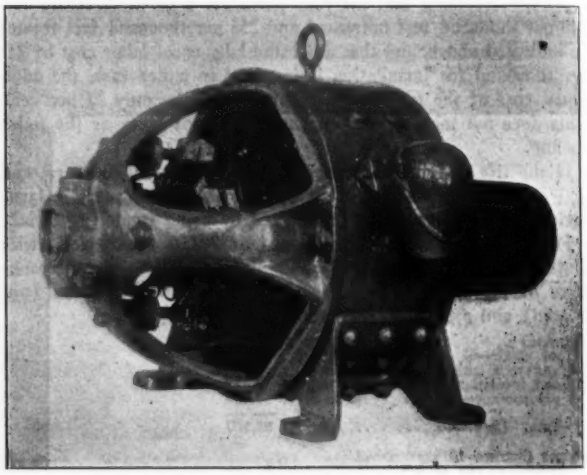
In the case of the mechanical drive with cone pulleys, it is not only impractical to determine whether the winding drum is operating at exactly the correct speed with reference to the other drum to produce the correct winding conditions at any given instant but it is also difficult or impossible to shift constantly the belt on the cone pulleys, as the roll increases in diameter to thereby maintaining the correct relative speeds for proper winding conditions. With the multiple motor winder drive however, it is possible to design the motors with such characteristics that they will automatically adapt themselves to the speeds necessary to produce the most nearly ideal winding conditions.

### Correct Relative Torque

Studies and investigations of winding paper rolls have disclosed many interesting facts with respect to this common operation, not generally known or appreciated and one of the very important factors is the maintenance of correct relative torques delivered to the several winder drums. In fact, in the last analysis what is necessary is correct relative torque rather than any specific relative speeds although the two are related, inasmuch as with varying diameters of roll it is necessary to have varying speeds in order to obtain correct relative torques.

Whether the relative torques are to remain constant throughout the winding of the roll depends upon the character of roll required and is controllable therefore, in the multiple motor drive, and can be adjusted readily if different winding characteristics are desired for different kinds of paper.

In the multiple motor winder drive, as developed by the Westinghouse Company, the system in general is similar to the well known variable voltage winder drive, which has been used for many years wherein a small variable voltage generator is provided to furnish power to the winder except that either two or four motors are used in place of one, depending upon whether a 2 drum or 4 drum winder is to be used. With this system, the several motors are connected simultaneously to the generator at very low voltage and then the voltage of the generator is gradually and smoothly increased as rapidly as desired, thereby starting up and increasing the speed of the winder as the generator voltage increases. The winder can of course be operated as long as desired at very low inching speed and can be operated at any and all other speeds between zero and the maximum winding speed. The motors start and stop in synchronism of course, and produce the necessary and desired characteristics throughout and at all inching and winding speeds. Not only is this system of winder drive extremely simple and flexible and adapted to higher winding speeds for rapid acceleration and deceleration, with ideal winding characteristics, but it eliminates all of the countershafts, cone pulleys, clutches, gear shifts, etc., requiring much less floor space and reducing maintenance to a negligibly small minimum.



Multiple Winder Drive

### Braking Generator System

Another development, which has been carried along with the multiple motor winder drive to still further improve general winding conditions is the braking generator system with automatic tension regulation. In this system a small direct current generator is coupled to the unwinding spool, this generator being driven of course, by the pull of the sheet and the output from this generator is used to assist in driving the winder, thereby recovering the energy ordinarily used up in the friction brake in producing heat.

[1] Member TAPPI; Industrial Engineer, Westinghouse Elec. & Mfg. Co., East Pittsburgh, Pa.

This braking generator performs several important functions. First, and probably most important of all, is the ability through the use of the tension regulator to maintain constant tension on the sheet at all times, regardless of the diameter of the paper roll on the spool and regardless of paper speed. Perhaps the next most important feature is the elimination of the friction brake, which has always been a source of annoyance and maintenance, especially on all high speed machines. And last of all, but still of considerable value, is the recovery of the braking energy and making use of it in driving the winder.

Considerable experimenting, both in the shop and in the field, on high speed winders was necessary before a braking generator system fully perfected and thoroughly satisfactory in every respect was produced. One of the essentials of such a system is simplicity. However, all of the difficulties have been overcome and with such complete simplicity that no more effort is required on the part of the operator in the operation of such equipment than is necessary with the older style winder drive and braking equipment, with which he is entirely famliar. In fact, the multiple motor winder drive with braking generator and automatic tension control is really considerably more simple and easy to operate from the operator's standpoint than is the case with former systems of mechanical drive and friction brake.

The tension of the sheet between the unwinding spool and the winder can easily be adjusted by the operator for any desired value and will thereafter be automatically maintained at that tension and this uniformity of tension in the sheet contributes the only remaining factor necessary for the winding of the perfect roll of paper, assuming of course that the winder itself has been properly designed and equipped throughout with anti-friction bearings.

Some of the detail features provide with the braking generator system are the pushbuttons, by means of which the unwinding spool can be turned over slowly or inched, by motor power to unwind sufficient paper for threading and it can be inched back to take up surplus slack and put tension on the sheet.

**Automatic Stops**

Whenever, the paper breaks, the unwinding spool very quickly stops under dynamic braking through the generator, to which it is connected. The unwinding spool stands still until the winder has stopped and the sheet has again been threaded through.

The multiple motor winder drive, and generator braking systems are independent of each other and either can be used without the other, although when both are used together the maximum advantage is obtained.

To summarize, not only has the electrical art kept pace with the demand but the ideal winding conditions have been studied out years in advance and systems and equipments been designed to ideally meet the most exacting requirements in the most economical, flexible and satisfactory way.

If paper is rejected because the rolls are too hard and perhaps split, or because they are too soft or have hard and soft spots, these troubles can be permanently corrected by the use of the right kind of system and apparatus and in addition, rolls with fewer breaks can be wound up with the braking generator system on account of the uniform tension on the sheet, which can be kept low enough so the paper will have very slight tendency to break.

# Current Paper Trade Literature

## Abstracts of Articles and Notes of Papermaking Inventions Compiled by the Committee on Abstracts and Bibliography of the Technical Association of the Pulp and Paper Industry

**By Clarence J. West, Chairman**

### Alkaline Processes

**Separating or Extracting Cellulose or Paper Pulp.** G. C. Godfrey, E. C. Benthall, E. S. Tarlton, H. F. Wheller and E. Spencer. Eng. Pats. 291,064 and 291,065, July 5 and 14, 1927.—No. 291,064—In the semi-continuous, i.e., Progressive digestion of fibrous material such as bamboos, grasses, etc., the digesters are connected by a ring pipe provided with suitable valves so that the liquor in any one digester may be blown into any other digester in the ring. Preferably four or any larger even number of digesters are connected in a double ring, alternate digesters being connected to alternate rings so that the digesters in one ring may be operated independently of those in the other ring. Only one ring pipe for steam and another for spent liquor need be provided for all the digesters in the system. No. 291,065—In order to avoid loss of cellulose during the final stage of progressive digestion processes, the concentration of active alkali should be highest at one of the intermediate lower-pressure stages, and the activity of digestion in the final stage should be modified by e.g. reducing the concentration of the liquor, reducing the pressure, or replacing a part of the whole of the caustic soda in the liquor by sodium sulphide or sulphite.—A.P.-C.

**Obtaining Cellulose from Ligno-Cellulosic Material.** O. Y. Imray, from I. G. Farbenindustrie A.-G. Eng. Pat. 298, 333, Aug. 30, 1927.—The comminuted raw material is treated with sufficient calcium hypochlorite solution containing not less than 2% of available chlorine (preferably about 2.8%) to oxidise the whole of the lignin. For fir wood that has been pretreated with *e.g.* 0.5% caustic soda solution at 95° C., about 50% chlorine on the weight of the wood is required. The temperature should not exceed 45°C. and the liquor is kept faintly alkaline during the process by the addition of a alkaline-earth hydroxide, preferably milk of lime; at no time however, should the alkalinity be higher than is represented by the presence of 0.15% of free calcium hydroxide.—A.P.-C.

**Digestion of Raw Materials for Paper Making.** S. Milne. Eng. pat. 297,713, March 26, 1927.—In the digestion of, *e.g.* grass, with a suitable re-agent, *e.g.* caustic soda, the reaction is controlled by means of an externally generated, transient electromotive force of high frequency, e.g. that derived from electromagnetic radiation broadcast from a wireless station.—A.P.-C.

**Digesting Wood Chips.** Robert Woodhead assignor to Venning D. Simons, U. S. pat. 1,687,076, Oct. 9, 1928.—In the manufacture of pulp by the soda or sulphate process, wood chips are preheated in the presence of previously used digesting liquor to which a small quantity of fresh digesting liquor has been added, the liquor is drawn off and the material is then subjected to a final cooking with fresh liquor.—A.P.-C.

**Process for Pulping Bleechwood, Bamboo, etc.** H. Runkel, Eng. pat. 296,547, Aug. 24, 1927.—The comminuted raw material is steeped in water or solutions of acid or basic substances, *e.g.* tin chloride or caustic soda, either at ordinary or elevated temperatures for a suitable time. After removal from the liquid and reduction to the state of fine fibres, the mass impregnated with alkali is chlorinated while suspended in water, centrifuged and treated with a 0.5 to 1 percent solution of caustic soda, the oxidation and chlorination process being repeated until a pure white cellulose is obtained.—A.P.-C.

**Extraction of Cellulose by the Chlorine Process.** B. Oglietti. Notz. Chim.-ind. 3, 279-280 (1928). A critical review of the development and present status of the chlorine process leads to the conclusion that in the present condition of the chemical industry, the chlorine process can be applied economically only in special cases where the raw materials do not give satis-

factory results on a large scale with other processes, or where because of their low commercial value more money can be put into the process. Chestnut residues fulfill these conditions, for with the aid of the chlorine process in modified form, a white cellulose can be obtained which can be used with satisfactory results in paper. The utilization of these residues for the production of cellulose can and should alleviate the dependence of will be found in Papierfabr. 25, 148-149, 340-342.—C. J. W.

**Problem of the Technical Utilization of Chlorine for the Decomposition of Plant Fibres.** P. Waentig. Papierfabr. 25, 144-148, 340-342 (1927). A reply is made to the criticisms of Wenzel in which calorimetric measurements of the chlorination process and the practical significance of these data are doubted. Direct measurements of the heat evolved during treatment with gaseous chlorine are difficult because of the formation of hydrochloric acid, which at high concentrations affects the reaction. There is no fundamental difference between the use of chlorine gas and chlorine water in the decomposition of plant fibres: in both cases a certain amount of water must be present in the fibres in order that the reaction may proceed at all. The yields and nature of the cellulose are similar. The possibility of the decomposition of wood into its fibres by chlorine depends on the degree of division of the raw material. Replies by H. Wenzel will be found in Papierfabr. 25, 148-149, 340-342.—C.J.W.

**Agitator for Causticizing.** Anon. Pulp Paper Mag. Can. 26, 1820 (Dec. 20, 1928). A brief description of the Dorr impeller agitator. The tank contents are circulated through a centrally located cylindrical draft tube, in which a marine propeller is rotated. The draft tube, which revolves slowly, is equipped at its lower end with a pair of radial rams given a general circulating movement in both the horizontal and vertical planes, which results in a high rate of change of position of the various particles in the liquor being causticized.—A.P.-C.

**Regenerating Spent Sulphate Liquors.** A. H. White Can. Pat. 283,128, Sept. 4, 1928. The spent liquors obtained by the sulphate process are regenerated by concentration until the effective heating value of the liquor is more than sufficient to calcine a weight of calcium carbonate equal to the weight of the soluble inorganic salts in the liquor, burring the concentrated liquor in air and in the presence of calcium carbonate, whereby the calcium carbonate is converted into quicklime, intimately mixing the quicklime with the con-combustible residue of the liquor to form a solid product comprising largely of quicklime, alkali carbonates and sulphates, mixing these solid products while still above red heat with carbonaceous matter sufficient to reduce the sulphates to sulphides, largely effecting such reduction at a temperature above 110° F., and leaching the reduced mass with water to dissolve alkaline salts.—A.P.-C.

**Regeneration of Sulphate Black Liquor.** A. H. White. Can. Pat. 283,820, Oct. 2, 1928. Black liquors from the sulphate process are regenerated by concentrating, adding sufficient quicklime to raise the temperature to distill destructively the organic constituents of the black liquor, raising the temperature of the residual mixture to above the minimum required to reduce sodium sulphate in presence of quicklime and below the temperature at which calcium carbonate dissociates, and lixiviating the product.—A.P.-C.

**Method of Evaporating Black Liquor.** William Barrs and Edward Barrs. Fr. Pat. 643,102, Oct. 5, 1927. The liquor is passed downwards through towers filled with a suitable inert filling material to expose a large surface of the liquid to contact with hot flue gases which are passed upwards through the towers.—A.P.-C.

**Causticizing Unit. S. W. D. Mount.** U. S. Pat. 1,685,929, Oct. 2, 1928. A vertical tower is built of superimposed cylindrical sections which are mounted upon a suitable pan or plate. A casing is superimposed upon and closes the top of the tower or casing and has a vent at its upper end; a number of pipes pass lengthwise through the casing and are mounted in and pass through the lower wall of the casing and through a transverse partition at its upper end, so that communication between the interior of the tower and the vent is through the pipes. Plates are clamped between a number of the adjoining lower sections of the tower so as to extend transversly into the interior of the tower. Each of these plates has a central opening, which is flanged upwards so as to form an annular reaction pan. A dome is mounted over each flange so that the lower edge of the dome will extend down into the annular pan. In the bottom of the tower is a conduit having an extension into the interior of the casing, which terminates in a downwardly flaring bell. One of the reacting chemicals, such as milk of lime, is introduced into the uppermost annular pan. An overflow pipe conducts the reacting mixture from this pan into the next lower one before it overflows through the central opening; and a similar overflow removes the reacting mixture from this next lower reaction pan into the pan formed by the closed bottom of the tower. The other chemical (sodium carbonate solution) is introduced into the upper portion of the casing surmounting the tower, and is siphoned into an annular pan formed a short distance above the uppermost reaction pan. From this pan it overflows in the form of a continuous conical sheet upon the dome of the uppermost reaction pan. The vapor generated by the heat of the reaction rises through the pipes in the top casing which acts as a heat exchanger and where a large portion of the vapor is condensed; it drips back into a suitable pan from which it is evacuated outside the tower. The mixture in which the reaction is complete is removed from the lowermost pan in the bottom of the tower and is then treated as usual. Air or steam may be injected into the liquid in the bottom pan of the tower, and its escape through the succeeding pans ensure thorough agitation of the reaction mixture.—A.P.-C.

**Regeneration of Alkali from Sulphate Waste Liquor, with Simultaneous Production of By-Products.** Adolph Matzner. Wochl. Papierfabr. 59, 119-121 (1928). A process is described by which the concentrated liquor is treated with sodium bisulphite to precipitate the lignin which is filter pressed and subjected to destructive distillation. The coke is heated in a reducing furnace to regenerate sulphide and the sodium sulphate liquor from the filter is causticized with lime. No operating data is given.—C.J.W.

**New Developments in (Waste) Liquor Evaporation.** J. Hausen. Papierfabr. 26, 173-179 (1928). Mechanical developments: electrical scale prevention, waster steam conversion and the burning of atomized sulphite waste liquor are considered.—C.J.W.

**New Continuous Filter for Sludges, etc.** Kurt W. Geissler. Z. Ver. Deut. Ing. 72, 1089-1092 (1928). The construction of different types of vacuum drum filters are described. In one type the sludge is contained inside the rotating drum and in contact with a filtering screen so that its weight aids the suction required to draw it through the screen; furthermore the tank ordinarily used as the liquid container in drum filters is here dispensed with. A filter especially adapted for cellulose pulp and on totally enclosed so that filteration in an inert atmosphere may be carried out are described.—C.J.W.

**Use of Tallol (Liquid Rosin) in the Alkali Wash of Petroleum Distillates.** K. Dittler Chem.—Ztg. 52, 577-578 (1929) Talbol (wasoil, liquid rosin) is a by-product of the cellulose industry. It is obtained in Scandinavia by treating rosin-rich conifer wood with 10° Be. Sodium hydroxide and hydrolyzing the soaps obtained by mineral acids. A typical dry product showed; acid number 157.3, saponification number 167.9 iodine number 115, fatty acids 48.5 percent, rosin acids 43.3 percent, unsaponifiable matter 8.2 percent. Its odor precludes its use in making soft soap. It is a good substitute for oleic acid to prevent the formation of emulsion in the alkali wash of petroleum distillates. The best results are obtained with 3 to 5° sodium

hydroxide. Mix well, heat with indirect steam to at least 85° C., and draw the clear solution after 12 hours of settling. The oil refined with this solution may take a brownish coloration but they are clear and stable.—C.J.W.

**Investigation and Purification of Sulphate Turpentine.** I. J. Postovski and V. G. Pljusnin Ann. Inst. Polyt. Ural 6, 245-258 (1927). B. C. A. 1928 B, 668 The turpentine oil obtained in abundance in the preparation of cellulose by the sulphate process may be readily purified from compounds which give precipitates with mercury salts (mercaptans and sulphides) by distillation in a current of steam. The first fifteen percent of the distillate contains 86 percent of these sulphur compounds and if fifty percent of the oil is distilled only 2 percent of the sulphur compounds remain. The purified sulphate turpentine is a colorless liquid of characteristic, pleasant odor, of initial boiling point 153° C., density at 15 degrees 0.8645, refractive index at 20° C., for the D line 1.46728. optical activity at 20° C., for the D line 14.17°. It contains 90% of alpha- (and beta-) pinene and not more than one percent of dipentene and is suitable for the preparation of paints and varnishes and for pharmaceutical preparations.—C.J.W.

**D Borneol and Cis—Terpin from Distillation Residues of Sulphate Turpentine Oil.** W. Qvist Biachem. Z. 197 476-481 (1928). From the fraction of the residues distilling at 120-145° and 15mm., a yield of 0.35 percent of *cis*-terpin was obtained. A yield of 2.1 percent of a mixture of *di*-borneol with 11-15% of *d*-borneol was obtained by distilling the residues in superheated steam, fraction-ating the dried distillate at ordinary pressure and crystallizing the solid which separated from the fraction which boiled at 200-230°. The boreol was found to be free from isobroeol. Since boreol derived from sulphite celluiose manufacture is levorotatory the different activities may be due to different methods of preparation, but more probably to the different woods used as raw materials.—C.J.W.

### Sulphite Process

**Modern Methods and Machinery in the Sulphite Industry.** C. Skolderbrand Paper Machinery, Ltd., Montreal, and C. D. Jensen Co., New York. Pulp Paper Mag. Can. 26, 1865-1870 (Dec. 27, 1928). An outline of modern methods and equipment as seem in American, Canadian and Scandinavian pulp mills. The article deals particularly with the merits of the K. M. W. knife barker, chipper and slab chipper, the Jensen acid system, the Svensson digester filler, pulp digger, K. M. W. knotter screen, the Kaelle system of digester steam-temperature regulator, the Decker and Stebbins cooking systems for recovery of heat, the Kamyr press as applied to both wet machines and pulp-drying machines, and the Fidalgo drying system.

**Sulphite Liquor.** Geo. A. Richter assignor to Brown Co. Can. Pat. 283,024, Sept. 4, 1928. A cooking liquor for the production of pulp comprises sulphurous acid solution containing ammonium sulphate and sodium salts.

**New Liquor Tower for Sulphite Pulp Mills.** Alois Danninger. Wachbl. Papierfarb. 59, Special no. 76178 (1928). Three wooden towers 8 feet in diameter are enclosed by a large iron tower, to combine maximum strength, protection from weathering and acid resistance.—C.J.W.

**Mechanization of Pulp Cooking.** Leo Friedlander. Papierfarb. 26, 474-475 (1928). An automatic relief valve for sulphite digesters is described.—C.J.W.

**Distributing Valve for Tower Acid Systems.** J. D. Jenssen assignorto G. D. Jenssen Co., U. S. Pat. 7,684,494, Sept. 18, 1928. The gas is supplied and distributed to the towers by means of a single main gas line. Near the bottom are pipes for introducing the gas into the towers, these side pipes being connected to the main pipe at the same point by means of a four-way valve. The gas outlets at the top of the towers are similarly connected to the main gas line. The valves are so constructed that the distribution of the gas to the strong and week acid towers can be reversed by operation of these two vales. The pipe from the main water supply, the suction side of the water pump (delivering water to the top of the weak acid tower), the discharge from the weak acid tower, the suction side of the weak acid pump (delivering weak acid to the top of the strong acid tower), the discharge from the strong acid tower, and the pipe through which the strong acid is sent to the recovery tower are all connected to a six-way cock, so that by operating the cock the distribution of water and weak acid to the weak and strong towers, respectively, can be reversed.—A.P.-C.

**Acid Resistance of Bronzes in Sulphite Pulp Mills.** Herbert Rauchberg. Papierfabr. 25, 473-477 (1927). Thirty-nine metals were suspended 2-3 weeks in a sulphite pulp digester containing a solution in which 4.65 percent free sulphur-dioxide was present at the beginning of the cook. Copper lost 7.6 percent in weight; lead 0.72 percent; tin 0.05 percent; while the zinc was completely dissolved. Antimony was not attacked. The addition of zinc to a bronze greatly reduces its acid resistance and tin and lead raise its resistance. Addition of 1.5 antimony percent increases the resistance of bronzes markedly. Antimony and lead behave in bronzes as if they were alloyed. The following limiting values are recommended for a good acid-resisting bronze: lead 15-19 percent; tin, 5-10 percent; antimony, according to the desired hardness, 1-5 percent; and copper, 66-75 percent. An aluminum bronze containing 92 percent aluminium and 8 percent copper was very strongly attacked by sulphurous acid.—C.J.W.

**Svensson Chip Filler for Sulphite Digesters.** Anon. Pulp Paper Mag. Can. 26, 1783-1784, (Deco 13, 1928); Paper Trade J. 87, No. 25, 58, (Dec. 20, 1928). The apparatus consists of two concentric steel pipes connected by a cross-pipe, each pipe having a separate valve. These two valves are connected by means of intermediate gears in such a way that when closing one valve, the other one opens slowly. The steam from the outer pipe effects a straight downward motion of the chips. The other one spreads the chips sideways. By opening the valves, either by hand or automatically, the filling is taken care of in such a way that the chips lie flat and form an almost horizontal surface. The chips are blown by means of saturated steam at about 60 to 75 lbs. pressure. The charge in the digester is thus increased, with resultant increase in output per digester, averaging about 16 to 20%, and going as high as 28% in some cases.—A.P.-C.

**Shortening the Time of Cooking in the Mitscherlich Process.** L. Friedlander. Papierfabr. 26, 335-337 (1928). In place of usual heating coils in the cooker an internal, cylindrical, copper heating chamber is recommended. The chamber is fitted with heating tubes so arranged that the inside walls of the chamber and the outsides of the tubes are heated by steam, whereas the liquor is heated inside the tubes and by the outside walls of the cylinder. In this way, a considerably increased heating surface is obtained with circulation of the liquor through the tubes and the time of cooking is halved.—C.J.W.

**Feeding Wood Chips to a Digester.** George H. Tomlinson. Can. Pat. 282,665, Aug. 21, 1928. The hot liquor blown from a digester with a cooked charge is separated from the charge and redirected to the top of the digester and simultaneously fed thereinto with the wood chips for a second charge, thereby soaking and preheating and closely packing the wood chips in the digester.—A.P.-C.

**Circulating System for Sulphite Pulping.** R. W. Hovey. Eng. Pat. 295,759. In a process for making paper pulp by digesting wood with liquor and steam, and wherein hot liquor from the top of the digester is injected into the bottom, the steam is injected axially while the liquor is injected in one or more annular zones, between the central axis and the periphery of the digester. The charge is undercooked to retain a portion of the lignins, pentosans and sugars, and the pulp is screened, the tailings being refined between disks having rubber rings.—A.P.-C.

# Kolitsch Automatic Stock Feed Regulator

It was announced a few months ago that a new regulator had been developed at the plant of the Port Alfred Pulp and Paper Corporation to automatically maintain a constant feed of stock on to the paper machine, but no details were given other than to state that the apparatus was based on variations in the suction at the boxes or couch roll. The following description is taken from the specifications of Unied States patent 1,695,380, which was granted to August Kolitsch, of Port Alfred, Que., on December 18, 1928.

When the web of paper carried by the wire reaches the suction boxes or suction roll, the amount of vacuum in these devices will vary according to the density of the web passing over them. The heavier or denser the web, the higher the vacuum will be, and the lighter or less dense the web, the lower the vacuum. This variation of vacuum is used to control the feed of the stock to the flow box; and in order to do so, in addition to the outlet of stock iced to the flow box with its manual adjustment, a second outlet is provided with a gate controlled by a pressure operated device, which is connected by a pipe to the suction boxes or suction roll and which is adapted to open or close the gate of the second outlet as the vacuum in the boxes or roll varies.

In the diagrammatic representation of the wet end of a paper machine shown in Figure 1, the flow box (2) feeds the stock to the apron or lip board (3), which then delivers it to the wire (1). By varying the amount of stock fed to the flow box (2), the feed to the wire (1) will be correspondingly varied.

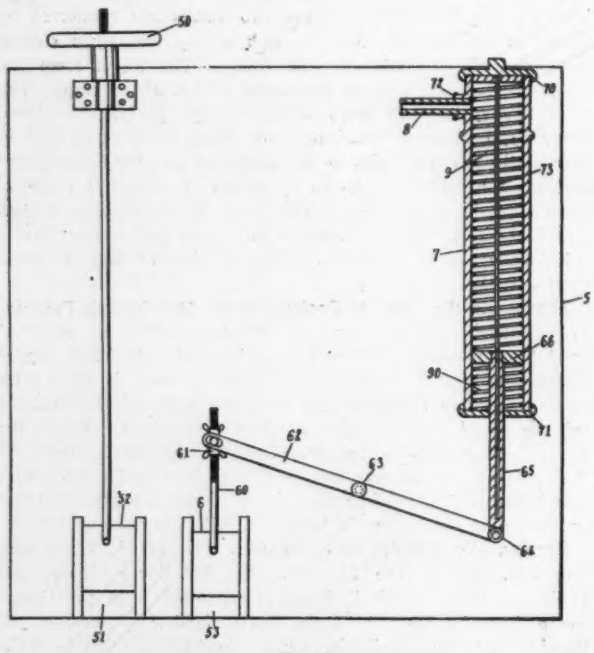



FIG. 2

A stock box (5), arranged to feed into the flow box (2), has two outlets (51) and (53), with gates (52) and (6) which control the flow of stock into the flow box (2). Of these outlets, (51), has a gate (52), controlled by a hand wheel (50). The other outlet, (53), has a gate (6), which is operated by a pressure valve mechanism in the cylinder (7), which is connected by the pupe (8) with the suction boxes (4) or the suction roll (40).

The pressure valve mechanism consists of a cylinder (7) bored to receive a plunger (66) mounted on a tube (65), which travels through the center of the lower cap (71). A guide rod (73) secured to the upper cap (70) slides through the plunger (66) and in the tube (65). A long coil spring (9) in the cylinder (7), above the plunger (66), and a short coil spring (90), below the plunger (66), retain it balanced at its normal position. The inlet (72) at the upper end of the cylinder (7) connects with the vacuum pipe (8), so that the vacuum in the upper end of the cylinder (7), above the plunger (66), will be always equal to that in the suction boxes or suction roll.

Pivoted to the lower closed end (64) of the pipe (65) is a

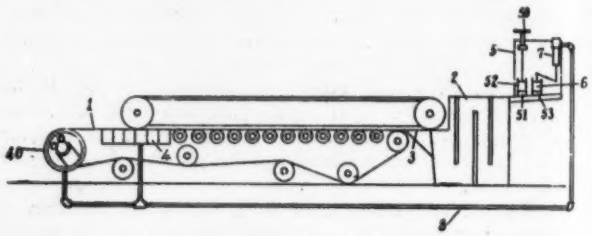



FIG. 1

lever (62) mounted on a pin (63) and coupled at the other end to an adjustable swivel (61), on a rod (60), attached to the gate (6) which it operates. The swivel (61) on the rod (60), by means of thumb nuts or equivalent means, permits the adjustment of the gate (6) to regulate the opening (53).

The regulator gate (6) is set by means of the swivel (61) to allow a certain normal flow to the flow box, and the main feed gate is then adjusted by the hand wheel to give a combined flow of the amount of stock required for the particular weight and density of the paper to be produced. If the web of paper passing over the suction boxes or suction roll should become thinner or lighter than is desired and for which the feed has been adjusted, the vacuum in the suction boxes or suction roll will drop, and this drop will immediately be communicated to the cylinder above the plunger.

The long spring normally holds the plunger against the vacuum in the upper part of the cylinder; but when the vacuum in this part of the cylinder is reduced the spring will exert a greater pressure on the plunger and will therefore force it downwards. This downward movement will raise the gate of the second outlet and will increase the flow of stock to the flow box and also to the wire of the paper machine, and thus increases the weight and density of the paper being produced.

Conversely, if the web of paper passing over the suction boxes or suction roll should become thicker or heavier than that for which the feed was adjusted, the vacuum will increase in the suction boxes or suction roll, and this increase of suction will be communicated to the upper part of the cylinder. The effect the an increase of vacuum will be to raise the plunger against the tension of the spring and thereby to lower the gate of the second outlet. The lowering of this gate will cut off the flow of stock to the flow box, and thereby reduce the rate of feed to the wire, so that the weight and density of the sheet will be reduced to the required values.—A. P.-C.

## New Digester Installations on Coast

PORTLAND, Ore., August 2, 1929.—The Willamette Iron and Steel Company, Portland, Ore., has just started construction of a large sulphite digester for the Ranier Pulp and Paper Company at Shelton, Wash. The digester is 18 feet in diameter and 59 feet high, of heavy riveted steel, and weighs 150 tons.

The Willamette Iron and Steel Company is just completing a 15 by 49-foot digester for the Spaulding Pulp and Paper Company's plant at Newburg, Ore.

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# Manufacturers and Marketing Trends*

Summary by J. L. Palmer[1]

### 1—Research

It is interesting to observe the extent to which manufacturing concerns have during the past few years found it advisable to introduce new blood into the management of sales activities. If an analysis were made of the sales executive personnel of, say, two hundred typical concerns, certain rather startling findings would probably result. We would in all probability discover that in a surprisingly large number of cases sales departments are headed by men whose outstanding traits are youthfulness, aggressiveness, variety of experience and freshness of viewpoint. In relatively few cases would we find in the saddle men of mature years and of long experience with one company. Why such a condition should exist is interesting food for speculation. There are several explanations. One is, of course, in the strenuous character of sales work. The pace is so fast and the strain so terrific that a premium is placed upon the qualities of youth. The executive must possess "drive" and enthusiasm. A second explanation is to be found in the pressure for profits. Heavy reliance has come to be placed upon the sales department to produce volume and net profit, and the sales executive whose company fails to produce either often must shoulder the blame and make way for a new man. A third, and possibly the most significant reason for high turnover among sales executives is in the growing realization of the need for freshness of viewpoint and willingness to depart from tradition in the management of the sales function. Executives who have become satisfied with the *status quo* and who are unable to break away from traditional methods and philosophies of management are being found wanting and are being replaced by younger men with no preconceived notions or prejudices, and with a willingness to experiment with innovations. With this change in the character of personnel is coming a shifting in emphasis in management, as a result of which research, planning and experimentation are receiving greater attention in the administration of the marketing function.

### Development of Marketing Management

This shifting in emphasis in the task of managing the sales activities of business concerns is a direct result of the rapid change taking place in the methods of distribution, which in turn is due primarily to the changing character of competition for markets. Mergers, mass retailing, private branding and over-production have created an entirely new marketing situation for most manufacturers. We are coming to realize that marketing management consists not only of the development and supervision of a sales organization, but of the intensive study of economic and market trends as well. A single mistake in appraising such a trend as the growth of the chain store, may be more costly than a hundred errors in handling salesmen.

Despite the growing importance of market and distribution research and the frequent need for radical changes in distribution policy the average concern is compelled to make many important sales decisions without access to certain very basic facts. The lack of such facts is due in part to the failure of the individual firm to carry on research on its own account, and in part to that of trade associations or governmental bodies to assemble certain types of information of widespread interest and value.

It is trite to remark that two of the most important bodies of information bearing upon marketing are those relating to consumers and to retail and wholesale distributors. How much does the average sales organization know about each of these subjects? Census data on population are collected every ten years. In intercensal years estimates of population of varying degrees of accuracy may be obtained. Neither the decennial census nor the usual population estimate presents a great deal of qualitative information about population. How do the purchasing powers of different groups compare? How do they spend their incomes? In what are they interested when they buy? What do they read? To what types of appeal do they respond? Where and when do they buy? What terms do they prefer? These and scores of other similar questions are very difficult to answer. One may obtain a great many buying power indices for use as sales yardsticks. The trouble is that in the first place they are "general" indices, and secondly they do not agree among themselves. If one works out correlations between the circulation of various magazines, the number of income tax returns, the number of passenger car registrations, "effective income" and other similar indices of purchasing power some rather startling discrepancies appear. The question naturally arises as to what index or combination of indices the individual manufacturer should employ.

Information on family spending habits is so scarce as to require no comment and the question as to what the consumer of today is interested in when he buys commodities is one on which we can but entertain difference of opinion. Some say that style and beauty are the important thing, and that price has become secondary. By others it is pointed out that quality is all-important, that the consumer of today, with his higher purchasing power, demands better merchandise. But the manufacturer of men's quality clothing points out that it is becoming more difficult to sell high-priced clothing, and that men in increasing numbers are satisfied to buy suits in the lower price ranges. The query is also raised as to why instalment selling, and the chain store with its "cash-and-carry" appeal, should have grown so rapidly during a period in

* American Management Association Bulletin.
[1] Asst. Prof. of Marketing, University of Chicago.

which the purchasing power of the consumer has been rising. But as evidence of the waning interest of the consumer in price, cases are cited of remarkably profitable sales campaigns based upon a style or service appeal, in which products were sold at admittedly high prices. Out of this maze of seemingly conflicting views about the consumer the problem of the individual concern is to discover what combination of appeals will produce the best results in the marketing of its product. It is probably safe in operating upon one basic assumption, i.e., that the great majority of buyers are interested primarily in value. Extremely wealthy buyers and purchasers of prestige and gift merchandise may in some measure be exceptions. Concerns may often proceed upon a second assumption, i.e., that the consumer is usually a poor judge of value. It is this fact, coupled with the ingeniousness of the seller in manipulating his product and advertising it, rather than any declining interest of the consumer in value, that accounts for most successful sales campaigns in which the intrinsic worth of the commodity is more or less disregarded.

Whether, along with good value, consumers are also interested in style, color, service, quality, etc., is a question of fact in the individual case and the individual manufacturer will do well to find out the facts with reference to his own product. Style and color, while of obvious value in selling women's apparel, are relatively unimportant in marketing men's clothing. Elaborate service, while the main patronage appeal of certain types of department stores, has not in recent years been a suitable basis upon which to build a large retail grocery business. High quality, while generally desired in the purchase of some commodities, is often not desired in the purchase of others. If for any reason at all substantial numbers of people decide they do not want to spend large parts of their incomes on clothing, shoes or expensive foods the only recourse for the manufacturer is to try to dissuade them from their views or to bring his product within the popular price range.

If it is true that the purchasing power of consumers has been rising in recent years it is equally true and perhaps more significant that their spending opportunity has been expanding at a more rapid rate. It is at least conceivable that the consumer is finding it more difficult than ever to satisfy his desire for commodities and that as a consequence he is buying with just as much discrimination and with just as great emphasis on value as ever before. Many, if not most, of the spectacular merchandising successes of the past decade, involving all sorts of products—groceries, drugs, automobiles, household supplies and appliances, radio—stand as evidence of the soundness of the proposition that the consumer is interested first of all in value—getting his money's worth. His attitude toward style, color, service and quality in individual products has been shifting about in the course of time, to the advantage of concerns which have closely followed trends and have adapted themselves to them, and to the great discomfiture of those which have not done so.

The following propositions should stand out in any discussion of the consumer as a buyer:

1—The starting point of every sales campaign is the consumer.
   A—Permanent sales success can be realized only when one's product and method of selling are in every respect adapted to consumer's desires and habits.
   B—Adaptation can be effected only when all pertinent facts about consumers are known.

2—Facts about consumers, though they have been greatly improved in recent years, are still far from adequate to suit the purposes of most manufacturers. They can be made adequate only through painstaking research carried on by the manufacturer, the industry of which the manufacturer is a part (especially important when the problem is to sell a product rather than a brand) and by outside agencies such as the government, publishing organizations and other miscellaneous research agencies.

**Distribution Research**

With competition becoming keener and more diversified it is important not only that the manufacturer know his market but also that he be thoroughly familiar with methods by which it may be reached. As present distribution policies in considerable measure determine those of the future it is imperative that distribution trends be constantly appraised. Retail and wholesale distributors are rapidly changing both in type and in importance. Only by thorough knowledge of present conditions and by intelligent projection of present trends into the future can the manufacturer have reasonable assurance of long-run sales success.

Despite this obvious truth available data about distribution are deplorably inadequate. We do not know what the total volume of retail trade is, nor do we know how it is divided between different trade groups and different areas. We do not have facts as to the relative importance of different channels of distribution for individual commodity groups. The present importance and rate of growth of the chain store are matters of crude approximation. The number of grocery chain units in the country has been variously estimated at from 49,000 to 70,000, and chains are alleged to handle all the way from 25 per cent to 45 per cent of the total grocery business. The manufacturer who tries to predicate a distribution policy upon an economic analysis of the chain store faces almost insurmountable obstacles, for the most elementary data needed for such an analysis are not available. Chain operating costs are not a matter of general knowledge, and neither do we know much about what it costs efficient wholesalers and independent retailers to do business. It has been variously estimated that grocery chains save the consumer all the way from nothing to 14 per cent on his grocery bill.

In establishing a distribution policy, however, it is important not only to know the present status of the various kinds of distributing organizations, but also to attempt to forecast their development. How large a part of the grocery business will be chain controlled ten or twenty years hence? Into what areas and under what conditions will mass retailing develop? What is the possibility that the independent retailer will successfully combat further chain expansion? Questions such as these must in some way be answered. It is of course conceded that accurate forecasts of future trends are impossible. But the probability of error in forecasting can surely be reduced by thorough study of the past and present. Consider how much more scientific would be the administration of marketing activities if manufacturers had access to such data as the following:

1—Distribution of total sales of each product as between different areas and different classes of distributors—for each year.
2—Volume of business done annually by each class of distributor—jobber, chain store, independent, etc.—in each marketing area.
3—Detailed operating costs and profits of typical distributors of the different classes.

The list might be expanded more or less indefinitely. Some of the information needed will be obtained if a census of distribution is taken in 1930. However, most of it is needed annually rather than at ten-year intervals. While it is probably the function of the government to gather certain basic distribution data it inevitably falls to the lot of trade groups or individual concerns to carry on studies of local interest to themselves.

This discussion of distribution may be summarized as follows:

1—General economic and distribution trends must be considered carefully in building sales programs and establishing sales policies.
2—As the machinery of distribution is rapidly changing in character it is no inconsiderable task to maintain contact with developments. It cannot be done satisfactorily in incidental fashion or by casual observation of important occurrences.
3—Industry must organize for distribution research if marketing is to become more efficient. Such research must be developed through four agencies:

A—The government.
B—Trade groups.
C—Individual concerns.
D—Miscellaneous agencies such as universities.

The manufacturer who does not recognize the importance of research in marketing in the future will overlook an excellent opportunity to out-distance competition, and may in fact ultimately find himself in a very precarious marketing position. *It is no argument against research to say that costs or "overhead" are too high to permit additional expenditures. The purpose of research is to reduce the probability of error in managerial decisions and to suggest new lines of profitable endeavor. It has no other defense. Unless it pays its way it has no place.*

There can be no denying that the research activity of the average marketing executive, whose point of view is such, is not to encourage the development of research activitity. It is in some instances the fault of general management which is unwilling to supply the marketing department with the man power necessary to carry on both research and operation. In concluding, the suggestion may be advanced that many sales executives might profit by briefly contemplating the distribution of effort in their own departments. How much of this effort—or how much of their time—goes into operation? How much into planning? How much into research? It will be found in many cases that the details of routine operation receive more than their full share of attention.

### II—Controlled Distribution

The remarks of several of the speakers at the recent Cincinnati convention of the American Management Association not only emphasized the need for market and distribution research but also called attention repeatedly to the importance of controlled distribution. The form which control takes will necessarily vary from case to case, but it is becoming increasingly obvious that some form of market control is essential for the manufacturer who wishes to be reasonably certain of a profitable future.

There are various methods of exercising control over distribution. Among these are the following:

1—Direct marketing to the consumer by mail, by canvassing or through owned retail outlets.
2—National advertising to the consumer to compel distributors to handle the advertised product.
3—Granting of exclusive agencies to retailers or wholesalers.
4—The establishment of systems of standards, records and reports for use in administering distributors.
5—The establishment of sales policies and methods designed to secure the support of the type of distributor employed, and at the same time to supply these distributors with merchandising and management aids of all kinds.

Individual manufacturers may, of course, employ any one or several of the above methods of control, the choice depending largely upon the circumstances of each case.

### Direct Selling

Direct selling undoubtedly has widespread possibilities, though it seems to be out of the question for some manufacturers. Selling by mail direct to consumers may be classed as an "irregular" method of marketing. It may be employed successfully in selling certain population groups, notably rural. A small part of the market for a great many products may be reached by this method. The general impression seems to be, however, that the total volume of direct selling by mail is not increasing. Certainly it is true that this method of marketing offers no solution of the marketing problems of most manufacturers.

The past decade has witnessed a sharp increase in the amount of house-to-house canvassing. The primary urge behind this movement seems to have been in the difficulty experienced by many manufacturers, notably of specialists, in obtaining satisfactory volume through the retail trade. There is little question but that direct canvassing will continue to be an important method of selling high-value specialties. The incapacity or unwillingness of most retailers to do "outside" selling practically compels manufacturers of types of merchandise that require intensive sales effort to go direct to the consumer. For reasons of expediency, and in order to reach buyers who can be reached only through retail stores, the manufacturer may work out his house-to-house plan in cooperation with retailers. But the necessity for direct, controlled contact with the consumer nevertheless remains. It is doubtful, however, whether in the sale of convenience and semi-convenience goods and shopping goods, distribution direct to the home can in any large number of cases be successful. Even in such lines, however, a certain amount of business can be done in this way. The success of such concerns as the Jewel Tea Company is ample evidence of the truth of this statement. However, the great majority of consumers for obvious reasons seem at present to prefer to visit a retail store to purchase convenience and shopping goods. It therefore follows that most manufacturers of such products must distribute through retail stores. This is particularly true in selling in rural communities and in our largest cities, where either selling costs are high or the difficulty of securing access to the consumer is great when the house-to-house method is employed.

A method of direct marketing which has been developing rapidly of late is that of selling through controlled outlets. It has for some time been a common method of distribution in the shoe industry and in the marketing of gasoline and oil. It has been developing on a considerable scale in the paint, men's clothing and tire industries, among others. On the contrary, it seems not to have become prominent in the food, drug and hardware trades. The following statements can probably be safely made concerning distribution through controlled outlets:

1—It is a possible method of marketing for manufacturers whose product lines make it possible completely to stock a retail store of a prevailing type. Conversely, difficulties are encountered by manufacturers who are not in a position to stock retail stores almost completely.
2—When the operation of controlled outlets places one in competition with his own independent dealers difficulties of an obvious nature are encountered.
3—When the manufacturer's product has a seasonal sale at retail it is apt to be expensive to operate his own outlets.
4—Products requiring general distribution, i.e., distribution through many thousands of outlets, must be sold through independent dealers.
5—Manufacturers can rarely set up their own outlets in thinly populated areas. The greatest possibilities are to be found in large population centers.

It is, of course, impossible to say to what extent distribution through controlled outlets will in the future prove to be a partial solution of the distribution problem of manufacturers. It will probably develop on a substantial scale as a means of reaching consumers in population centers in cases in which the manufacturer's line fits into the shoping habits of consumers. But in the grocery, drug, hardware, dry goods, furniture and other like industries in which the average producer supplies but a small part of the requirements of the typical retail store the possibility of extensive development seems remote.

### Consumer Advertising

The manufacturer who is not in a position to sell direct to the consumer must resort to other means of controlling the distribution of his product. Advertising on an extensive scale to the consumer has been found in many instances to be a very effective control device. It typically looms large in the distribution plans of producers of commodities requiring very wide distribution through various types of outlets. Cigarettes, chewing gum and certain grocery products are cases in point. National market coverage for such products requires distribution through several hun-

dred thousand retail outlets. Direct selling is obviously out of the question. Elaborate methods of control over and cooperation with dealers are clearly impractical. The one major weapon of the manufacturer in such cases is advertising. An appreciation of this fact on the part of numerous manufacturers is one explanation of the increasing number of multi-million-dollar advertising appropriations. Some manufacturers have found it profitable to carry this control strategy so far as to run directly counter to the interests of both retailers and wholesalers, thus arousing a great deal of ill-will. Whether such a policy will prove profitable in the long run remains to be seen.

**Exclusive Agencies**

The granting of exclusive agencies to wholesalers or retailers, involving as it does the extension of a concession to the latter, gives the manufacturer a right to expect close cooperation in return. If circumstances are such as to permit the manufacturer to compel his distributors to carry no competing merchandise, or no other merchandise at all, a substantial degree of control is secured. But exclusive distribution is not advisable in all lines, and in many cases where it can be employed the number of desirable dealers is limited. Hence even when the product permits of exclusive agency distribution manufacturers usually experience difficulty in securing satisfactory representation. Nevertheless there seems to be some tendency to follow a policy of exclusive or limited distribution even in marketing products in the convenience goods class, i.e., certain grocery specialties. This seems to be due to a conviction in certain quarters that better results can be secured by obtaining close cooperation from a limited number of dealers than by seeking general distribution through dealers of every description.

**Standards, Records and Reports**

Some manufacturers have met with success in applying systems of standards, records and reports to dealers, and have thus been able to secure a degree of control otherwise impossible. A producer of stock feeds has been able to induce many of his dealers to engage in contests based on dealer quotas. A manufacturer of floor covering has persuaded most of his wholesale distributors to report periodically stocks on hand and sales to individual dealers. Thus one of the major weaknesses of jobber distribution has been overcome, i.e., inability to determine how thoroughly market coverage is being secured. The extent to which such methods as these of controlling distributors can be employed is difficult to say. It would seem that the willingness of jobbers and dealers to report sales and other important data to manufacturers, and to operate under quotas set by manufacturers, would depend largely upon what they felt they might gain by so doing. It follows, therefore, that manufacturers whose lines represent a substantial part of distributors' profits, and who command the confidence of distributors may profitably employ these control devices. However, when the distributor handles widely diversified lines and has little interest in the product of any one manufacturer, or when he is suspicious of the ultimate objective of the manufacturer other means of control must be sought.

**Selling Policies and Dealer Helps**

When it is inadvisable to sell direct to the consumer, and when the control methods above described cannot be employed the manufacturer must typically resort to the following:

1—The adoption of sales policies which work in the interest of the type of distributor upon which major reliance is placed.
2—The use of various forms of sales aid, with a view towards overcoming the shortcomings of distributors.

*Examples of policies adopted chiefly to secure the cooperation of distributors are the following*:

1—Discounts so arranged as to favor one type of distributor, protecting him from the competition of another.
2—Refusal to sell anyone direct, as a means of protecting distributors.
3—Adherence to quoted or list prices in all transactions.
4—Refusal to sell pool-car operators who compete with service jobbers.
5—Refusal to sell certain specified distributors or types of distributors.
6—Giving distributors a voice in the determination of the manufacturer's marketing policies.
7—Bonuses or refunds based upon degree of cooperation with the manufacturer.

*Examples of sales aids extended by manufacturers to distributors are the following*

1—Missionary or specialty salesmen, used to help wholesale distributors sell the manufacturer's product.
2—Canvassing or sampling crews, used to build initial distribution in a territory or increase consumer demand.
3—Direct mail campaigns, designed for the use of jobbers or retailers by manufacturers.
4—Display of various kinds for the use of retailers.
5—Systems of stock control, accounting, etc., for the use of retailers.
6—Instructional materials designed to help the jobber or retailer sell the manufacturer's product.
7—A general merchandising or management service to distributors—assistance in the solution of any problem encountered by a distributor.

Particularly in such lines of business as groceries and drugs have scores of manufacturers adopted many of these sales aids. One consequence has been intense criticism of the resulting waste and duplication of sales effort. However, it is difficult to see how, so long as present marketing trends continue, any one manufacturer can reduce the sales pressure brought to bear on distributors and at the same time hold his business. Competition compels the use of aggressive, direct, high-pressure methods.

**Why Is Controlled Distribution Becoming More Important?**

What accounts for the great stress which manufacturers are now placing upon controlled distribution? Why is it that in practically all lines of business the tendency seems to be for the producer to attempt to set up closer contacts with the consumer of his product? The answer seems to lie in several directions.

In the first place, it is a well-known fact that a condition of overproduction or excess capacity exists in many industries. This is in some cases a legacy of the war period, in others a result of declining demand, and in still others a natural consequence of competition. Whenever the condition appears it of course creates a difficult selling problem for the producer. It places a premium upon the building of increased sales volume and necessitates that the producer control the machinery of selling in order to secure such volume. It is unlikely that as time goes on this condition of over-capacity will become less prevalent. Mass operations in production will continue; competition will continue, though perhaps in an increasing number of cases it will of necessity be tempered with some degree of cooperation; the character of consumer's demand will continue to undergo change. In short, there is every reason to believe that the pressure upon marketing which comes from the technical production situation of industry will not be substantially reduced in the near future.

A second explanation of the growing importance of market control is in the broadening area of competition. This is a direct result of the larger number of commodities which are in competition for the consumer's dollar. If the automobile manufacturer works out a more effective method of selling it is of direct concern to the clothing manufacturer and the meat packer. The possibility of buying innumerable luxuries and semi-luxuries on the installment plan inevitably interferes with the sale of many staple articles. In short the demand for a product may be very seriously affected by a successful stroke of sales strategy executed by an industry seemingly far removed in influence. Under such circumstances contact with the consumer is of obvious importance.

Controlled distribution is also necessitated by the growth of mass retailing. There was a time when the loss of a distributor was a matter of small consequence to the manufacturer. He could be replaced easily. But with numerous chain organizations dominating certain markets the loss of a distributor may mean practically the loss of a market. The growth of chains has unquestionably increased the marketing risks of manufacturers. It has compelled them to pursue policies which will give reasonable assurance of permanent contact with the consumer or to be content with a highly precarious situation. Many a manufacturer has during the past decade been selling in a vanishing market as a result of adherence to the practice of distributing through independent retailers. The gasoline and oil business and the grocery trade in certain areas are cases in point.

The tendency displayed by numerous large retailing organizations to engage in manufacture or private branding may be advanced as a fourth reason compelling manufacturers to seek means of controlling marketing. Comprehensive data as to the extent to which integration has developed in retailing are not available. However, it is known that grocery chains often perform such processing operations as baking, coffee roasting, canning and occasionally even meat packing. Drug chains in some cases make candy, syrups, ice cream, rubber goods, and toilet articles. Mail order chains produce their own paint. To the extent that retail organizations select to do their own producing the market position of the independent manufacturer is threatened. A possible move for him is to operate his own outlets, yet this is not always practicable. Under such circumstances the position of the manufacturer is not a particularly enviable one.

Integration is of course a matter of concern to the manufacturer not only when a retail organization engages in production, but also when a competing producer goes into retailing. Witness the predicament of a clothing manufacturer selling through the largest clothing store in one of our largest cities when that store is purchased by a competitor.

### Conclusion

What will happen to manufacturers' distribution problems during the next decade or two it is, of course, impossible to say. Developments in retailing and wholesaling will in considerable measure shape the policies of manufacturers. Whether mass retailing, now accounting for perhaps 40 per cent of the total retail trade of the country, will predominate in the future is a matter of opinion. There is also no agreement as to how far large retailing institutions will go in controlling manufacturing. Large-scale operations are making their appearance in wholesaling as well as in retailing. One large chain has already been formed in the drug trade. Others are reported under way in dry goods and groceries. On the other hand there are numerous trade groups in which mass operation has not developed appreciably either in wholesaling or retailing.

It seems, however, that the general tendency in distribution is towards the development of larger units and a more coherent, more highly integrated, compact system of marketing. Horizontal mergers, integration, the chain stores, the "voluntary" chains all support this assertion. The compartmentalized system of marketing which has prevailed in the past—independent manufacturer, independent sales agent, independent jobber and independent retailer—seems to have outlived its usefulness. In the interest of all concerned these agencies must coordinate their efforts in the future. Indications are that the uncoordinated, incoherent, highly compartmentalized and extremely wasteful system of the past will give way to a well coordinated, coherent, integrated and relatively efficient system in the future. There is some ground for the belief that the future will see a vertical rather than a horizontal split-up of the agencies of distribution, that groups of manufacturing, jobbing and retailing institutions with common interests will be aligned against one another in competition for markets.

## News of the Boston Paper Trade

BOSTON, Mass., August 19, 1929.—Arthur E. Ham & Sons are mailing a new booklet on Marlowe, made by the Worthy Paper Company Association, Mittineague, Mass. The new shade, Sudan, which has just been added to the line, is used on the cover. The same firm is handling a new line, Malvern Text, an attractive, fine laid antique, with deckle edges, in white and six delicate tints, made by the Hampshire Paper Company, Inc., South Hadley Falls, Mass.

Carter, Rice & Co. Corp. have mailed a folder of Strathmore's newest paper, Wayside Text, containing a message to printers. The paper is made in seven attractive colors, in a variety of items, including a plate finish for half-tones.

Myer Sousy, waste paper stock dealer, 270 Second street, Chelsea, Mass., sustained a loss of at least $15,000 worth of baled waste paper, when his two-story storehouse burned down.

Massey & Wendell, Inc., New England agents for the United Paper Company, Atlanta, Ga., say that the new line of Sepo Oiled apple wrappers made by that company, is going over well.

The August issue of "How," published by Tileston & Hollingsworth and edited by A. V. Howland, contains a number of snappy articles, in addition to the "review" of the current sheet of the 1929 calendar put out by that company.

F. H. Merrill, president of the Andrews Paper Company, has returned from a trip to New York and Maine. Willard F. Dillaway, of the same firm, accompanied by Mrs. Dillaway, has returned from a trip in which he toured Southern Ireland. Mr. Dillaway has also toured Scotland, England and France.

Harry R. Woodward, president of Train, Smith Company, has sailed for Europe.

Nathan S. Clark, president of Knight, Allen & Clark, Inc., left Saturday for his summer residence, Gilmanton, N. H., expecting to return after Labor Day.

Waldo Pratt, president of Hollingsworth & Whitney Company, is at his summer residence at Lake Sebago, Me.

J. C. DeCoster, representative in Boston and New York of the American Writing Paper Company, is at the Nautilus Inn, Nantasket Beach, Mass.

Horace Binney Sargent, president of E. Butterworth & Co., Inc., accompanied by Mrs. Sargent, left Saturday for a two weeks' vacation at Bristol, N. H. Mr. Sargent recently became a grandfather.

Gordon E. Emerson, vice president of E. Butterworth & Co., Inc., has returned from a two weeks' vacation at the South Shore, Massachusetts.

Robert Chase, formerly salesman for W. H. Claflin & Co., Inc., has taken a similar position with Massey & Wendell, Inc.

Percy D. Wells, paper merchant, left Friday accompanied by Mrs. Wells, for the White Mountains and the Thousand Islands.

Allen J. Nadeau, of Dudley, Mass., a manufacturer carrying on business under the name of Chatham Center Paper Mills, Chatham Center, N. Y., has filed a voluntary petition in bankruptcy with liabilities of $13,232 and assets of $6,000.

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## Charles E. Weed Dead

HINSDALE, N. H., August 19, 1929.—Charles Ellsworth Weed, 73, died Saturday evening, August 10, following a shock which he sustained July 31. He was born in Topsham, Vt., in 1856, son of Joseph and Ella (Butterfield) Weed. He came to Hinsdale 35 years ago to live and was at the time of his death superintendent of the Fiske Paper Company, which position he had held the past 10 years. Previous to that time he held a similar position with the Ashuelot Paper Company. On November 4, 1889, at North Haverhill, N. H., Mr. Weed married Emily Smith, who survived. He also leaves a son, Ellwood Weed; one brother, Edward Weed; and a grandson, George Weed, all of this town.

He was a member of Golden Rule lodge, No. 77, F. and A. M., and Ammousac of the I. O. O. F. lodge of Groveton, N. H.

COST SECTION

## Curling of Glazed Papers

Glazed and Fancy Paper Manufacturers Association, Leonard I. Houghton, Secretary, 146 Chestnut Street, Springfield Mass., has just issued a bulletin regarding the causes and remedies for the curling of glazed papers. The information contained in the bulletin is a result of an investigation recently made by this association. It contains all the suggestions and information which the association could gather from its members and others.

CAUSES

1. Coated one side only.
2. Rotary action on paper surface in process of glazing.
3. Paper normally curls when one side only is wet, as with paste.

REMEDIES

A. By Manufacturers.

1. Coating material—special ingredients.
2. Calender lightly.
3. Roll paper with colored side out.
4. Allow rolls to cool after glazing before sheeting.

B. By Manufacturers and Users

5. Use a soft and pliable body stock.
6. Use a heavier body stock (20 to 25 pounds).
7. Allow the paper to season after glazing.
8. Use curl-breakers in sheeting.

C. Users

9. Acclimate paper to atmosphere of room in which it will be used.
10. Humidify the plant in which paper is used and stored.
11. Conduct electricity from paper when used.
12. Use cold paste or glue instead of hot paste.
13 Use suction or fans on pasted paper conveyer.

Glazed paper, like colored person's hair, has a tendency to curl by its very nature. In the first place when paper is coated on one side only the absorptive qualities of the sides of paper become unequal. It is this difference of moisture absorption that causes one side to expand or contract more than the other side and thus make the paper curl. Moist substances, and dry or moist air, cause the change of moisture content. The process of glazing paper accentuates the tendency to curl more than other finishes such as flint or plate. Paper is glazed by subjecting the coated side to a fast revolving roll; this rotary action tends to make the paper curl in toward the side so treated. In addition to the two above causes any paper normally curls if one side only is moistened, as with paste.

There are certain things which can be done to remedy the troubles caused by this curling and to lessen the curling but there is no sure cure. Each case has to be treated more or less individually. The manufacturer can help some by the use of certain ingredients in the coating material which have the tendency within certain limits to lessen the curling; he can also calender the paper lightly and it will not curl so badly as if calendered hard; in some cases it helps considerably if the paper is rolled with the colored side out instead of in as most papers are rolled; and if the paper is allowed to cool after glazing before sheeting it relaxes somewhat and the curling caused by glazing is largely annulled.

Heavier paper used as a body stock will curl less than lighter papers. Soft pliable body stock paper will naturally retain a curl less than hard papers. Allowing the paper to season removes some of the curl generated in its manufacture. The use of curl-breakers on sheeters are helpful though their effectiveness is not entirely convincing.

The users best remedy is to humidify his plant. In this way the moisture content of both sides of the paper are kept nearly uniform. The paper should be stored in the same humidity as the room in which it is going to be used. It is more than one has a right to expect to store rolls of paper beside the steam pipes on the side of a room in cold weather thus drying the paper out and then immediately subjecting one side only to an application of paste for a box machine or putting through a sheeter for a printing press. Static electricity affects the curl and can be remedied by providing some means for conduction when the paper is used. The box makers are more and more using suction or fans to keep the paper flat on the conveyer after the paste is applied. If cold paste or glue is used instead of hot paste there will be less curl because the cold material does not so quickly penetrate into the paper.

## Good Straw Crop in Mid West

DAYTON, Ohio, August 19, 1929—The wheat harvest has progressed sufficiently to warrant the claim there will be the usual supply of straw for paper manufacturing purposes, according to the growers. Whether they have properly sized up the needs of the manufacturers, however, is a question.

Though the wheat prospects were anything but encouraging during the greater part of the season owing to weather conditions, the ripening of the crop during June and early July was unusual and the harvest has been splendid.

All through Ohio, Indiana and Michigan and in parts of Wisconsin the threshing of grain has been under way during the past fortnight and some of it is continuing at this date.

Corn is making rapid progress in the Miami Valley and tourists report a large crop is assured. However, the cornstalk supply always has been big and the use of this material for papermaking purposes has not advanced to the point where concern is felt even in the slightest degree in the matter of supply. There are those who believe, however, that the corn stalk supply will figure significantly in the not distant future, in the matter of manufacturing paper as experiments have proven a good quality of paper can be made from the refuse.

Paper made from corn stalks has been used in various sections of Ohio and other states for the printing of newspapers and other publications.

A tour by the writer in various Middle States the past week showed in striking manner the productivity of corn and wheat land. It demonstrated that if either of these papermaking products are needed, they can be grown in unlimited quantities. There is no doubt the farmer and grower would welcome the use of cornstalks on an elaborate scale.

The wheat stand this year in Ohio was damaged by heavy rains, following setbacks in the early stages of development due to adverse weather, but semi-official reports indicate a 35,000,000 bushel crop in Ohio.

## W. P. Bullock Made Second Lieutenant

Official United States Army orders have assigned Warren Paul Bullock, son of Warren B. Bullock, Manager of the Import Committee of the American Paper Industry, to the Seventy-Seventh Division, as a Second Lieutenant in the Officers Reserve Corps, and he will be assigned to some infantry organization in that division. Lieut. Bullock graduated in June from the Forestry Department of Cornell University, where he was cadet colonel of the infantry regiment in the Reserve Officers Training Corps, and where he won the annual cup presented to the cadet officer showing the highest efficiency and qualities of leadership during the year. In becoming a reserve officer he is following the family history, his father having been an officer during the World War and now a major in the Officers Reserve Corps, assigned to a motor transport organization.

## Japanese Paper Production

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., August 21, 1929.—Production by the mills of the Japanese Paper Manufacturers' Association during May amounted to 59,707 short tons and sales to 61,139 tons, bringing the total for the first five months of this year up to 294,368 tons and 291,283 tons respectively. News print paper accounts for nearly one-half of this output, with other foreign style printings making up an additional one-fourth.

# PAPER DEFINITIONS

## CLASSIFICATION and DEFINITION of PAPER TERMS

***By F. A. Curtis and Clarence J. West***

*The first Dictionary of Paper Terms ever compiled in this form and the only work of its kind available.*

## 1460 PAPER TERMS

***Drawn up by the Sectional Committee on Definitions***

THIS BOOK should be in the hands of every paper manufacturer, every paper merchant, exporter, importer, every converter and every buyer of paper, as well as every producer of materials used in paper manufacture.

### CONTENTS

In this list of definitions has been included, as far as possible—

(a) The basic paper terms used in the classification (identified by the classification numbers).

(b) The various commercial papers, the names of which have, in most instances, grown out of special uses to which the papers have been put.

(c) Various converted articles made from paper.

(d) Standard sizes of papers.

(e) Special finishes of papers.

(f) Miscellaneous paper terms.

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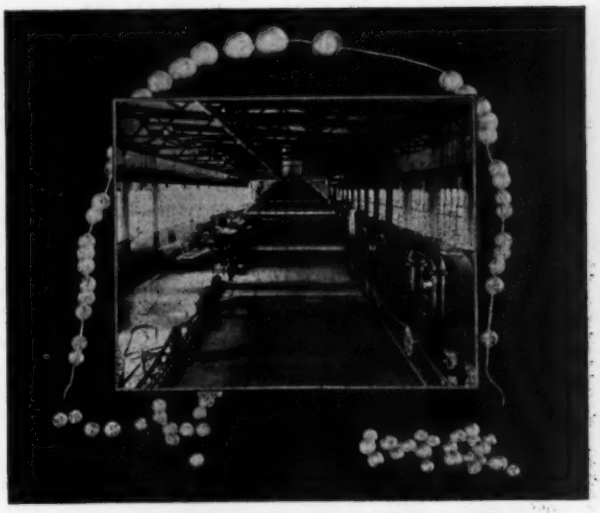
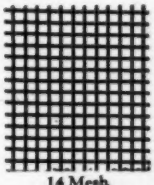


# You can't keep beads on a broken necklace!

60 Mesh Fourdrinier Wire



14 Mesh Cylinder Wire

12x64 Mesh Corduroy Cloth

ONE break in a necklace will scatter the beads!

One break in a Fourdrinier wire will scatter production, interest and profits!

So much is at stake when you purchase a Fourdrinier wire—not only in the service and satisfaction of the wire itself, but in the continuous operation of your Fourdrinier machine; in the quality of your paper; and in the profit return from your entire mill!

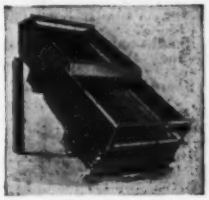
The best and most dependable wire is by far the most profitable investment—that's why so many superintendents specify Tyler Fourdrinier Wires.

Tyler wires are woven from a specially-treated, tough and resilient wire. They run straight and true—they lie flat and smooth on the machine—they assure long, continuous service and a minimum of time lost for repairs.

Whatever kind of paper you make—on whatever type of machine—there is a Tyler wire which will assure you greater efficiency and added profit.

**TYLER WIRES**

*for screening* WOOD CHIPS



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*Send for literature*

*The* W. S. TYLER COMPANY

CLEVELAND, OHIO

# Imports of Paper and Paper Stock

## NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

## NEW YORK IMPORTS

WEEK ENDING AUGUST 17, 1929

### SUMMARY

Cigarette paper .....577 cs.
Wall paper .....16 bls., 40 cs.
Paper hangings .....3 pkgs.
News print .....357 rolls
Printing paper .....176 cs.
Wrapping paper .....50 bls., 5 cs.
Filter paper .....105 bls., 105 cs.
Writing paper .....40 cs.
Photo paper .....45 cs.
Colored paper .....26 cs.
Tissue paper .....118 cs.
Decalcomania paper .....26 cs.
Sulphate paper .....442 rolls
Surface coated paper .....11 cs.
Baryta coated paper .....90 cs.
Metal paper .....6 cs.
Coated paper .....16 cs.
Greaseproof paper .....178 rolls, 102 cs.
Lace paper .....4 cs.
Cover paper .....2 cs.
Trunk paper .....2 cs.
Caoutchouc paper .....2 cs.
Stencil paper .....4 cs.
Straw board .....181 rolls
Miscellaneous paper .....66 cs.

### CIGARETTE PAPER

Liggett & Myers Tobacco Co., Samaria, Liverpool, 10 cs.
British American Tobacco Co., Aquitania, Southampton, 67 cs.
De Manduit Paper Corp., Pipestone County, Havre, 500 cs.

### WALL PAPER

R. E. Thibout, Inc., Hamburg, Hamburg, 5 bls.
Globe Shipping Co., Hamburg, Hamburg, 5 bls.
F. J. Emmerich, Hamburg, Hamburg, 2 cs.
Bendix Paper Co., Hamburg, Hamburg, 14 cs.
Irving Trust Co., Hamburg, Hamburg, 1 ble., 13 cs.
J. E. Bernard & Co., Hamburg, Hamburg, 1 ble.
R. F. Downing & Co., Homeric, Southampton, 7 cs.
A. C. Dodman, Jr., Inc., Homeric, Southampton, 1 cs., 2 blg.
G. W. Sheldon & Co., Aquitania, Southampton, 2 cs.
Heemsoth, Basse & Co., G. Washington, Bremen, 3 cs.
Wedeman, Godknecht & Lally, G. Washington, Bremen, 2 bls.

### PAPER HANGINGS

W. H. S. Lloyd & Co., Samaria, Liverpool, 3 pkgs.

### NEWS PRINT

Perkins, Goodwin & Co., Hamburg, Hamburg, 95 rolls.
A. S. Zabriskie, G. Washington, Bremen, 66 rolls.
Hudson Trading Co., Kelkheim, Fagervik, 196 rolls.

### PRINTING PAPER

E. Dietzgen & Co., Volendam, Rotterdam, 73 cs.
International Forwarding Co., J. Jadot, Antwerp, 7 cs.
J. Beckhard & Co., Caronia, London, 3 cs.
Gallagher & Ascher, Caronia, London, 1 cs.
W. A. Foster & Co., Transylvania, Glasgow, 12 cs.
Hoboken Trust Co., G. Washington, Bremen, 4 cs.
Globe Shipping Co., Karlsruhe, Bremen, 76 cs.

### WRAPPING PAPER

Birn & Wachenheim, Pennland, Antwerp, 5 cs.
J. E. Bernard & Co., Hamburg, Hamburg, 50 bls.

### FILTER PAPER

H. Reeve Angel & Co., Inc., Caronia, London, 20 cs.
J. Manheimer, Homeric, Southampton, 35 bls.
H. Reeve Angel & Co., Inc., Homeric, Southampton, 70 bls., 15 cs.
E. Fougera & Co., La Bourdonnais, Bordeaux, 70 cs.

### WRITING PAPER

B. Altman & Co., France, Havre, 1 cs.
B. Altman & Co., Homeric, Southampton, 13 cs.
J. E. Bernard & Co., Homeric, Southampton, 1 cs.
Van Oppen & Co., Homeric, Southampton, 21 cs.
Guibout Freres, Aquitania, Southampton, 4 cs.

### PHOTO PAPER

J. J. Gavin, Aquitania, Southampton, 3 cs.
Agfa-Ansco Corp., Mexico, Vera Cruz, 42 cs.

### COLORED PAPER

J. Beckhard & Co., Muenchen, Bremen, 12 cs.
McKesson & Robbins, G. Washington, Bremen, 9 cs.
Universal Car Loading Co., G. Washington, Bremen, 5 cs.

### TISSUE PAPER

Parsons & Whittemore, Inc., Samaria, Liverpool, 17 cs.
Schenckers, Inc., Cleveland, Hamburg, 75 cs.
O. Hommel & Co., Cedric, Liverpool, 2 cs.
B. F. Drakenfeld & Co., Cedric, Liverpool, 2 cs.
F. C. Strype, Augustus, Genoa, 18 cs.
W. J. Byrnes, Homeric, Southampton, 4 cs.

### DECALCOMANIA PAPER

B. F. Drakenfeld & Co., Cedric, Liverpool, 22 cs. (duplex).
B. F. Drakenfeld & Co., Cedric, Liverpool, 1 cs. (simplex).
Phoenix Shipping Co., Cleveland, Hamburg, 2 cs.
C. W. Sellers, G. Washington, Bremen, 1 cs.

### SULPHATE PAPER

Insight Paper Co., Tyrifjord, Oslo, 442 rolls.

### SURFACE COATED PAPER

Globe Shipping Co., Hamburg, Hamburg, 4 cs.
Globe Shipping Co., Cleveland, Hamburg, 7 cs.

### BARYTA COATED PAPER

Globe Shipping Co., G. Washington, Bremen, 90 cs.

### METAL PAPER

Taub, Hummel & Schnall, Hamburg, Hamburg, 3 cs.
F. Murray Hill Co., Karlsruhe, Bremen, 3 cs.

### COATED PAPER

Pacific National Bank, Hamburg, Hamburg, 16 cs.

### GREASEPROOF PAPER

W. von Doorn, Volendam, Rotterdam, 178 rolls.
Central Hanover Bank & Trust Co., Cleveland, Hamburg, 102 cs.

### LACE PAPER

A. P. Stauff, Inc., Karlsruhe, Bremen, 4 cs.

### COVER PAPER

Hensel, Bruckman & Lorbacher, Hamburg, Hamburg, 2 cs.

### TRUNK PAPER

P. H. Petry & Co., Hamburg, Hamburg, 2 cs.

### CAOUTCHOUC PAPER

American Express Co., Hamburg, Hamburg, 2 cs.

### STENCIL PAPER

International Forwarding Co., Hamburg, Hamburg, 4 cs.

### STRAW BOARD

Perkins, Goodwin & Co., Volendam, Rotterdam, 181 rolls.

### MISCELLANEOUS PAPER

P. C. Zuhlke, Volendam, Rotterdam, 18 cs.
Gallagher & Ascher, Hamburg, Hamburg, 3 cs.
Coenca, Morrison Co., Hamburg, Hamburg, 3 cs.
Universal Car Loading Co., Hamburg, Hamburg, 3 cs.
Keller Dorian Paper Co., France, Havre, 17 cs.
Japan Paper Co., Augustus, Genoa, 16 cs.
Hensel, Bruckman & Lorbacher, Augustus, Florence, 3 cs.
Hensel, Bruckman & Lorbacher, G. Washington, Bremen, 3 cs.

### RAGS, BAGGINGS, ETC.

V. Galaup, Volendam, Rotterdam, 5 bls. rags.
W. Steck & Co., Volendam, Rotterdam, 24 bls. cotton waste.
Overton & Co., Volendam, Rotterdam, 47 bls. bagging.
Castle & Overton, Inc., Samaria, Liverpool, 129 bls. flax waste.
Brown Bros. & Co., Transylvania, Glasgow, 135 bls. rags.
A. H. Searle, Transylvania, Glasgow, 63 bls. rags.
V. Galaup, Exanthia, Bari, 256 bls. rags.
Banco Com'l Italiane Trust Co., Excello, Genoa, 52 bls. bagging.
Banco Com'l Italiane Trust Co., Excello, Genoa, 146 bls. rags.
Guaranty Trust Co., Excello, Catania, 41 bls. rags.
Equitable Trust Co., Hamburg, Hamburg, 36 bls. rags.
W. Schall & Co., Hamburg, Hamburg, 126 bls. cotton waste.
Castle & Overton, Inc., Hamburg, Hamburg 13 bls. rags.
Trust Co. of North America, Cabo Villano, Malaga, 91 bls. rags.
E. Butterworth & Co., Cabo Villano, Genoa, 71 bls. rags.
A. W. Fenton, Inc., Saco, Rotterdam, 50 bls. rags.
N. Y. Trust Co., Saco, Rotterdam, 157 bls. cotton waste.
Irving Trust Co., Saco, Rotterdam, 34 bls. rags.
Overton & Co., Saco, Rotterdam, 53 bls. rags.
Whaling Waste Products Co., Saco, Rotterdam, 133 bls. wipers.
Kidder Peabody Accep. Corp., Saco, Rotterdam, 49 bls. rags.
Flintkote Co., Bannack, Manchester, 207 bls. new cuttings.
1st National Bank of Boston, Exmouth, Barcelona, 145 bls. pickers.
W. Schall & Co., Exmouth, Valencia, 88 bls. bagging.
D. M. Hicks, Inc., Sarcoxie, Havre, 8 bls. rags.
B. D. Kaplan, Sarcoxie, Havre, 12 bls. rags.
Castle & Overton, Inc., Sarcoxie, Havre, 131 bls. rags.
Salomon Bros. & Co., Sarcoxie, Havre, 30 bls. rags.
D. M. Hicks, Inc., Sarcoxie, Dunkirk, 48 bls. rags.
D. M. Hicks, Inc., Sarcoxie, Dunkirk, 219 bls. flax pulp.
E. Butterworth & Co., Inc., Sarcoxie, Dunkirk, 186 bls. flax waste.
M. Snedeker Corp., G. Washington, Bremen, 22 bls. paper stock.
Bank of Manhattan Co., G. Washington, Bremen, 97 bls. linen waste.
P. J. Schweitzer, Pipestone County, Dunkirk, 40 bls. flax waste.
D. I. Murphy, Pipestone County, Dunkirk, 36 bls. thread waste.
Castle & Overton, Inc., Pipestone County, Dunkirk, 61 bls. flax waste.
V. Galaup, Pipestone County, Havre, 109 bls. rags.
Castle & Overton, Inc., United States, Copenhagen, 83 bls. rags.
Castle & Overton, Inc., Cabo Torres, Spain, 143 bls. rags.
E. J. Keller Co., Inc., J. Jadot, ——, 67 bls. rags.
W. Schall & Co., Cabo Torres, Bilbao, 118 bls. rags.

### OLD ROPE

W. Steck & Co., Volendam, Rotterdam, 48 bales.
Brown Bros. & Co., Bristol City, Bristol, 99
J. A. Steer & Co., Bristol City, Bristol, 50 bls.
Irving Trust Co., Cleveland, Hamburg, 32 bls.
Brown Bros. & Co., Pennland, Antwerp, 64 coils.
Brown Bros. & Co., Saco, Rotterdam, 150 pkgs.
——, Sarcoxie, Havre, 117 rolls.
Brown Bros. & Co., Cabo Torres, Pasages, 52 rolls.
W. Schall & Co., Cabo Torres, Pasages, 337 rolls.

### CASEIN

Atterbury Bros., Inc., Southern Cross, Buenos Aires, 834 bags.
Central Hannover Bank & Trust Co., Balfe, Buenos Aires, 250 bags.

### CHINA CLAY

L. A. Salomon Bros., Bristol City, Bristol, 240 bags.
L. A. Salomon Bros., Bristol City, Bristol, 40 casks.

### WOOD PULP

Castle & Overton, Inc., Cleveland, Hamburg, 481 bls. wood pulp, 72 tons.
Castle & Overton, Inc., Hamburg, Hamburg, 354 bls. wood pulp, 53 tons.
Chemical Bank & Trust Co., Tyrifjord, Oslo, 180 bls. sulphite.
J. Andersen & Co., Tyrifjord, Oslo, 2,160 bls. sulphite.
O. E. Kiaer, Tyrifjord, Oslo, 250 bls. sulphite.
M. Gottesman & Co., Inc., Saco, Rotterdam, 1,000 bls. wood pulp, 100 tons.
Pagel, Horton & Co., Inc., Bird City, Gefle, 5,500 bls. wood pulp, 609 tons.
Bulkley, Dunton & Co. Bird City, ——, 1,625 bls. wood pulp, 330 tons.
Atterbury Bros., Inc., United States, Oslo, 500 bls. wood pulp.
Atterbury Bros., Inc., Bergensfjord, Oslo, 500 bls. wood pulp.
——, Bergensfjord, Oslo, 250 bls. wood pulp.
J. Andersen & Co., Fernglen, Stugsund, 1,000 bls. sulphite, 200 tons.
Price & Pierce, Ltd., Fernglen, Stugsund, 600 bls. sulphite, 100 tons.
E. M. Sergeant & Co., Fernglen, Hernosand, 600 bls. sulphite, 100 tons.
J. Andersen & Co., Fernglen, Hernosand, 6,480 bls. sulphite, 1,080 tons.
J. Andersen & Co., Fernglen, Hernosand, 3,750 bls. sulphate, 750 tons.
Bulkley, Dunton & Co., Fernglen, ——, 17,330 bls. wood pulp, 3,335 tons.
Bulkley, Dunton & Co., Kelkheim, ——, 1,250 bls. wood pulp.
Johanson, Wales & Sparre, Inc., Kelkheim, Hernosand, 4,050 bls. sulphite, 685 tons.

*(Continued on page 64)*

# A Slitter Knife Grinder

**For Slitter Knives or Circular Discs**

**2 to 20 inches diameter**

**This grinder is designed for the proper fitting of slitter knives.**

**A motor for the wheel and one for turning the knife gives a smooth, positive knife revolution during the grinding process.**

***Write for circular.***

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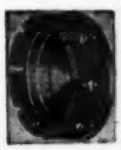
**BIG RAPIDS, MICH., U. S. A.**

## NEW ROGERS TYPE R

**SECTIONAL WHEEL KNIFE GRINDER**

**Widely used for grinding paper & Chipper Knives**

*Write for bulletin*



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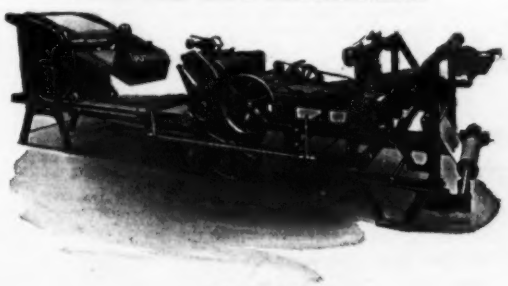
# POTDEVIN

**PRINTED BAG MACHINERY**



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**Phones: Windsor 1700-1701-1702**

# Imports of Paper and Paper Stock

(*Continued from page 62*)

Johanson, Wales & Sparre, Inc., Kelkheim, Hernosand, 3,600 bls. sulphate, 609 tons.
Johanson, Wales & Sparre, Inc., Kelkheim, Fagervik, 425 bls. sulphite.
J. Andersen & Co., Kelkheim, Fagervik, 900 bls. sulphite.
Parsons & Whittemore, Inc., Kelkheim, Fagervik, 125 bls. wood pulp.
Scandinavian Pulp Agency, Inc., Kelkheim, Fagervik, 1,525 bls. sulphite.
Perkins, Goodwin & Co., Kelkheim, Fagervik, 250 bls. sulphite.
M. Gottesman & Co., Inc., Kelkheim, Iggesund, 850 bls. wood pulp, 170 tons.
Scandinavian Pulp Agency, Inc., Kelkheim, Skutskar, 2,000 bls. wood pulp.
Stora Kopperberg Corp., Kelkheim, Skutskar, 1,030 bls. wood pulp.

WOOD FLOUR

B. L. Soberski, Tyrifjord, Frederickstad, 5,175 bags.
Corn Exchange Bank, Tyrifjord, Flekkefjord, 1,000 bags.
B. L. Soberski, Bergensfjord, Frederickstad, 1,095 bags.

WOOD PULP BOARDS

Lagerloef Trading Co., Bird City, Helsingfors, 154 bls., 22 tons.

## PHILADELPHIA IMPORTS

WEEK ENDING AUGUST 17, 1929

J. A. Steer & Co., Bristol City, Bristol, 181 bls. waste paper.
Bank of The Manhattan Co., Bristol City, Bristol, 86 bls. rags.
J. W. Hampton, Jr., & Co., Bristol City, Bristol, 157 tons china clay.
Castle & Overton, Inc., Excello, Genoa, 2 bls. new cuttings.
Banco Com'l Italiane Trust Co., Cabo Villano, Leghorn, 437 bls. rags.
C. B. Richard & Co., Cabo Villano, Leghorn, 169 bls. rags.
Brown Bros. & Co., Tyrifjord, Oslo, 1,934 bls. sulphite pulp.
Chemical Bank & Trust Co., Tyrifjord, Oslo, 2,400 bls. sulphite pulp.
Phila. National Bank, Exmouth, Barcelona, 92 bls. rags.
V. Galaup, Sarcoxie, Havre, 179 bls. rags.
Salomon Bros. & Co., Sarcoxie, Havre, 75 bls. rags.
Delaware Hard Fibre Co., Sarcoxie, Havre, 80 bls. rags.
D. I. Murphy, Sarcoxie, Havre, 168 bls. bagging.
D. I. Murphy, Sarcoxie, Havre, 566 bls. rags.
J. M. Hagy Waste Works, Sarcoxie, Havre, 68 bls. rags.
Katzenstein & Keene, Inc., Sarcoxie, Havre, 28 bls. bagging.
Katzenstein & Keene, Inc., Sarcoxie, Havre, 125 bls. rags.
E. Mayer, Sarcoxie, Havre, 90 bls. rags.
A. Hurst & Co., Sarcoxie, Havre, 150 bls. rags.
Darmstadt, Scott & Courtney, Sarcoxie, Havre, 99 bls. rags.
J. A. Steer & Co., Sarcoxie, Dunkirk, 248 bls. rags.
V. Galaup, Sarcoxie, Dunkirk, 86 bls. rags.
Salomon Bros. & Co., Sarcoxie, Dunkirk, 102 bls. rags.
D. I. Murphy, Sarcoxie, Dunkirk, 104 bls. rags.
Katzenstein & Keene, Inc., Sarcoxie, Dunkirk, 417 bls. rags.
Katzenstein & Keene, Inc., Sarcoxie, Dunkirk, 206 bls. bagging.
Corn Exchange Bank, Sarcoxie, Dunkirk, 59 bls. rags.
J. M. Hagy Waste Works, Sarcoxie, Dunkirk, 61 bls. rags.
National Waste Co., Sarcoxie, Dunkirk, 59 bls. rags.
Castle & Overton, Inc., Hinnoy, Spain, 200 bls. rags.
Castle & Overton, Inc., Holger, Germany, 182 bls. rags, 58 bls. bagging.
Castle & Overton, Inc., Harburg, Germany, 3,735 bls. wood pulp.
Castle & Overton, Inc., Wanja, Sweden, 300 bls. wood pulp.
Castle & Overton, Inc., ——, Germany, 2,176 bls. wood pulp.
E. J. Keller Co., Inc., Exchester, ——, 64 bls. rags, 59 bls. rope.
E. J. Keller Co., Inc., Harburg, ——, 354 bls. wood pulp.
E. J. Keller Co., Inc., Burgerdyk, ——, 87 bls. rags.

## BALTIMORE IMPORTS

WEEK ENDING AUGUST 17, 1929

National City Bank, Exanthia, Piraeus, 315 bls. bagging.
Bulkley, Dunton & Co., Bird City, ——, 4,050 bls. wood pulp, 757 tons.
Price & Pierce, Ltd., Bird City, Gefle, 400 bls. wood pulp, 50 tons.
Pagel, Horton & Co., Inc., Bird City, Obbola, 3,150 bls. sulphate, 450 tons.
Pagel, Horton & Co., Inc., Bird City, Sikea, 3,000 bls. sulphite, 508 tons.
Pagel, Horton & Co., Inc., Bird City, Honrefors, 5,250 bls. sulphite, 875 tons.
Pagel, Horton & Co., Inc., Bird City, Husum, 150 bls. sulphite, 25 tons.
Pagel, Horton & Co., Inc., Bird City, Husum, 9,000 bls. sulphate, 1,500 tons.
Pagel, Horton & Co., Inc., Bird City, Hernosand, 1,800 bls. sulphate, 300 tons.
E. M. Sergeant & Co., Bird City, Hernosand, 2,100 bls. wood pulp, 350 tons.
J. Andersen & Co., Bird City, Hernosand, 150 bls. wood pulp, 25 tons.
J. Andersen & Co., Bird City, Hernosand, 150 bls. sulphite, 25 tons.
Bulkley, Dunton & Co., Copenhagen, ——, 1,875 bls. wood pulp.
Bulkley, Dunton & Co., Braheholm, ——, 500 bls. wood pulp.
Castle & Overton, Inc., Harburg, Germany, 2,772 bls. wood pulp.
Castle & Overton, Inc., Eifel, Germany, 5,797 bls. wood pulp.
Scandinavian Pulp Agency, Inc., Kelkheim, Fagervik, 500 bls. sulphite.
M. Gottesman & Co., Inc., Kelkheim, Iggesund, 1,600 bls. sulphite, 320 tons.
Stora Kopperberg Corp., Kelkheim, Skutskar, 2,400 bls. wood pulp.
Johanson, Wales & Sparre, Inc., Kelkheim, Hernosand, 3,600 bls. sulphite, 660 tons.
Johanson, Wales & Sparre, Inc., Kelkheim, Hernosand, 600 bls. sulphate, 101 tons.
Bulkley, Dunton & Co., Kelkheim, ——, 3,125 bls. wood pulp, 625 tons.

## BOSTON IMPORTS

WEEK ENDING AUGUST 17, 1929

L. A. Salomon Bros., Dakarian, Liverpool, 150 casks china clay.
English China Clays Sales Corp., Portland Maru, Fowey, 455 casks china clay.
English China Clays Sales Corp., Portland Maru, Fowey, 2,867 tons china clay.
Moore & Munger, Portland Maru, Fowey, 253 tons china clay.
D. I. Murphy, Pipestone County, Dunkirk, 210 bls. rags.
Kalbfleisch Corp., Pipestone County, Havre, 267 bags casein.
D. I. Murphy, Pipestone County, Havre, 342 bls. rags.
Irving Trust Co., Pipestone County, Havre, 45 bls. new cuttings.
Hollingsworth & Vose Co., Pipestone County, Havre, 64 bls. bagging.
Bank of Commerce & Trust Co., Pipestone County, Havre, 224 bls. rags.
Castle & Overton, Inc., Eifel, Germany, 2,871 bls. wood pulp.
Bulkley, Dunton & Co., Odensholm, ——, 875 bls. wood pulp.

## CHARLESTON IMPORTS

WEEK ENDING AUGUST 17, 1929

Castle & Overton, Inc., ——, Japan, 420 bls. bagging.

## NORFOLK IMPORTS

WEEK ENDING AUGUST 17, 1929

Castle & Overton, Inc., Eifel, Germany, 187 bls. wood pulp.

## NEWPORT NEWS IMPORTS

WEEK ENDING AUGUST 17, 1929

M. Gottesman & Co., Inc., Kelkheim, Iggesund, 1,475 bls. sulphite, 295 tons.
M. Gottesman & Co., Inc., Kelkheim, Iggesund, 1,250 bls. sulphate, 250 tons.

## News Print Production for July

Production of news print in Canada during July 1929 amounted to 229,045 tons and shipments to 227,502 tons according to the News Print Service. Production in the United States was 11,578 tons and shipments 112,616 tons, making a total United States and Canadian news print production of 340,623 tons and shipments of 340,118 tons. During July, 21,966 tons of news print were made in Newfoundland and 1,744 tons in Mexico, so that the total North American production for the month amounted to 364,333 tons.

The Canadian mills porduced 194,680 tons more in the first seven months of 1929 than in the first seven months of 1928, which was an increase of 14 per cent. The United States output was 19,374 tons or 2 per cent less than for the first seven months of 1928. Production in Newfoundland was 13,942 tons or 11 per cent more in the first seven months of 1929 than in 1928 and in Mexico 2,102 tons more, making a total increase of 191,350 tons or 8 per cent over the same period in 1928.

During July the Canadian mills operated at 84.8 per cent of rated capacity, United States mills at 76.5 per cent and Newfoundland mills at 107.2 per cent. Stock of news print paper at Canadian mills totalled 28,993 tons at the end of July and at United States mills 23,603 tons, making a combined total of 52,596 tons, which was equivalent to 3.3 days' average production.

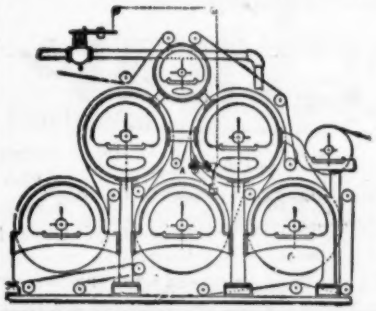
## Bagley & Sewall Co. Have Outing

[FROM OUR REGULAR CORRESPONDENT]

WATERTOWN, N. Y., August 19, 1929.—The annual outing for the employees of the Bagley & Sewall Company was held Friday of last week at Southwick Beach. Chartered cars conveyed the workers and their families to the beach where a program of sports for both men and women was carried out. A ball game between the foundry and machine shop teams was one of the main events while dancing was enjoyed in the afternoon. Several hundred employees and executives attended the affair which was voted the most successful ever held by the firm.

Construction work on the new power house addition being built by the firm on Sewall Island is nearing completion and the contractors expect that it will be ready for occupancy some time next month. The structure is being built of reinforced concrete and steel materials and will give the firm one of the best power plants in this section. The old power plant on Moulton street will, it is understood, be abandoned when the new building is ready for occupancy.

The Pickles Drying Regulator



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YOU'LL MAKE NO MISTAKE IN ACCEPTING IT

# Pickles Drying Regulator

will do everything we claim for it and more. The test costs you nothing until you are satisfied. Many mills tried one and now have every machine equipped. Write for list of users and other information.

**W. F. PICKLES** **Buckland, Conn.**

# The B Q QUALITY PULPS

"HAFSLUND BEAR"
Bleached Sulphite

"FORSHAGA"
Bleached Sulphite

"HURUM SPECIAL"
Extra Strong Kraft

"BAMBLE"
Extra Strong Kraft

*Fresh Monthly Shipments—No Closed Winter Season*

**The Borregaard Company**
Incorporated
200 FIFTH AVENUE NEW YORK, N. Y.

# THE DRAPER FELTS

All kinds and styles of Felts for all kinds and styles of Papers.

Write us about your Felt problems and let us help you reduce your Felt Costs—we will call anywhere at any time.

**DRAPER BROS. COMPANY**
CANTON, MASS.
*Woolen manufacturers since 1856*

# EASTWOOD
## FOURDRINIER-CYLINDER-WASHER
# WIRES

EASTWOOD WIRE CORPORATION, BELLEVILLE N.J U.S.A.

## New York Market Review

Office of the PAPER TRADE JOURNAL,
Wednesday, August 21, 1929.

Although trading in the local paper market during the past week was mostly along routine lines, the volume of inquiries around for future business is encouraging and the outlook for the closing months of the year is decidedly bright. Sales forces of the leading paper organizations are planning a strenuous Fall campaign. Prices are generally holding to previously recorded levels.

Improvement in the news print industry continues. Production in both the United States and Canada is being maintained in heavy volume and supplies are moving into consumption at an excellent pace. Stocks of news print paper at North American mills are not excessive. Prices are steady and unchanged and confidence in the future trend of the market is expressed in most quarters.

Demand for the various grades of paper board is fairly persistent but the price situation is still unsatisfactory. The position of the fine paper market is sound, with quotations unchanged, in most instances. Tissues are going forward in fair volume. No radical changes were recorded in the coarse paper market. Summer specialties continue in excellent request. Wrapping paper is in normal demand for the season.

### Mechanical Pulp

The ground wood market was moderately active during the past week. Production has been curtailed somewhat both in North America and abroad. Offerings at present are about sufficient to take care of current requirements. Prices of practically all grades of mechanical pulp remain unaltered and there is little talk of concessions around.

### Chemical Pulp

Offerings of both imported and domestic chemical pulp are decidedly limited and the local market is exhibiting a strong undertone. Quite a good volume of business has been booked for 1930 delivery and producers are generally well sold ahead. Strong unbleached sulphite continues in an exceptionally strong position. Prices are steady to firm and shading is infrequent.

### Old Rope and Bagging

The old rope market is slightly easier and prices have declined somewhat. Domestic manila rope is now quoted at from $4.75 to $5.00 and imported manila rope at from $4.25 to $4.40. Mixed rope is going forward in routine manner. The bagging market is showing signs of improvement. Both scrap bagging and gunny bagging are more active. Prices are unchanged.

### Rags

Steadiness prevails in the domestic rag market. Demand for cotton cuttings is expanding. Roofing rags are in better request. Mixed rags are moving freely. Prices are generally holding to schedule. The foreign rag market continues rather quiet. Shippers abroad are still asking high prices, due to heavy home consumption.

### Waste Paper

Mill interest in the waste paper market is more evident than of late. Demand for old kraft machine compressed bales is improving. Folded news and mixed paper continue steady. Soft white shavings are in fair request. Book stock is slightly easier. Stitchless flat stock is now offered at from $1.50 to $1.60. Collections of the various grades of paper stock are well up to average for the season.

### Twine

Conditions in the twine market are fairly satisfactory. Demand for the various grades is seasonal. While business at present is quiet, a general revival of activity is anticipated when the summer holidays end. Prices are generally steady and unaltered and there is little talk of shading.

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### Westminster Mills to be Rebuilt

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., August 19, 1929.—Mills of the Westminster Paper Company, Westminster, B. C., will be rebuilt immediately, according to announcement of J. J. Herb, president. The mills were completely destroyed by fire several weeks ago. Mr. Herb is visiting his former home at Kaukauna, Wis., where he was associated with the Thilmany Pulp and Paper Company for twenty years. A conference was held with the stockholders, most of whom are in Wisconsin, concerning the rebuilding program.

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### Indiana Printers Visit Consolidated Mills

[FROM OUR REGULAR CORRESPONDENT]

INDIANAPOLIS, Ind., August 19, 1929.—Indiana printers and publishers have begun returning from being guests of the Consolidated Water Power and Paper Company of Wisconsin on a tour of inspection of the company's plants. The Indiana printers mobilized at Chicago where a special train took them to Madison, the Dells, Wisconsin Rapids, Superior, Duluth, Port Arthur, Brule, Ashland, Ironwood, Mich., and Eagle River, Wis. The tour occupied four days and the Indiana contingent reported a wonderful time.

---

### Goes With Crystal Tissue Co.

It was inadvertently stated in the head line of the article announcing the appointment of Sherman Perry as general sales-manager of the Crystal Tissue Company of Middletown, Ohio, in the PAPER TRADE JOURNAL of August 8 that Mr. Perry was "to be sales manager for the American Tissue Company." The article itself correctly stated Mr. Perry's new connection, but as the heading may cause confusion in the minds of some readers, this correction is printed with the hope that it may straighten the matter out.

---

### Start Building Improvements at Camas

[FROM OUR REGULAR CORRESPONDENT]

PORTLAND, Ore., August 16, 1929.—A. Guthrie & Co. of Portland have started construction on the new units of the Crown-Willamette Pulp and Paper Company's additions at Camas, Wash. The first work has been on the new bleach plant, and the machine room buildings are expected to be under way shortly. According to unconfirmed reports three new paper machines have been ordered, two to be additional equipment and one to replace an older machine.

---

### Visit Pacific Northwest Paper Mills

[FROM OUR REGULAR CORRESPONDENT]

PORTLAND, Ore., August 16, 1929.—The Pacific Northwest Paper Mills, Inc., Portland, manufacturers of "Adwrap" and other specialty paper products, held open house August 16 to several civic organizations who sent their industrial committees to view the splendidly equipped establishment. The plant is located at 287 East Farragut street in a rapidly growing industrial section of the city.

**Cotton and Paper Rolls**
**Super Calenders**
**Friction Calenders**
**Embossing Calenders**
**Hydraulic Presses and Pumps**

*Successors to the Granger Foundry & Machine Co.*

**The Textile-Finishing Machinery Company**
**PROVIDENCE, R. I.**

# LINDSAY FOURDRINIER WIRES

**What counts most with you is not what we say about our wires, but what they do.**
**We make "Spiral Weave" Fourdrinier wires, which prevent grooving of seams, also "Longcrimp" wires for Kraft and News.**

**THE LINDSAY WIRE WEAVING CO.**
**14025 Aspinwall Ave.**
**CLEVELAND, OHIO**

*Prompt deliveries made from stocks in*
**NEW YORK**
**BOSTON**
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**CHICAGO**

TRADE MARK

***Do they come back?***

**Yes, for Heller and Merz dyestuff. Have been doing so for sixty years.**

**Quality is the big magnet. Heller and Merz have never skimped on the factors that resolve into dyestuffs of excellence.**

**It is good business to ask us to prove it.**

***The* HELLER & MERZ COMPANY**
**505 Hudson St., New York**

**Boston** 367 Atlantic Ave.
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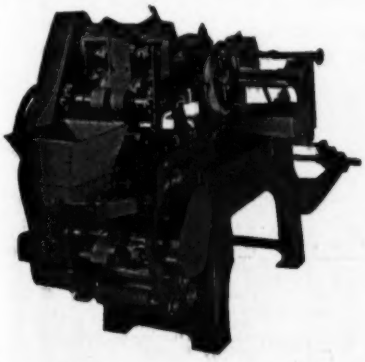

# HIGHEST SPEED Paper Bag Machinery

**Get My Quotations Before Placing Your Orders**
***Special Machinery Designed and Built***

**A. L. PARRISH**
**1702 Robinson St., South Bend, Ind.**

# Miscellaneous Markets

Office of the PAPER TRADE JOURNAL,
Wednesday, August 21, 1929.

BLANC FIXE.—Conditions in the blanc fixe market are fairly satisfactory. Demand for both the pulp and the powder is well up to average for the season. The pulp is quoted at from $42.50 to $45.00 per ton, in bulk, while the powder is selling at from 3¼ cents to 4½ cents per pound, in barrels, at works.

BLEACHING POWDER.—The bleaching powder market is practically unchanged. Supplies are moving into consumption in normal volume for the time of year. Prices are holding to schedule without difficulty. Bleaching powder is quoted at from $2.00 to $2.35 per 100 pounds, in large drums, at works.

CASEIN.—Trading in the casein market was fairly active. Domestic casein is still quoted at from 15 cents to 16 cents per pound. Argentine standard ground is selling at from 15½ cents to 16 cents per pound and finely ground at from 15¾ cents to 16¼ cents per pound, all in bags, car lot quantities.

CAUSTIC SODA.—The caustic soda market is exhibiting a strong undertone. Shipments against contract are going forward in good volume. Solid caustic soda is quoted at from $2.90 to $2.95, while the flake and the ground are selling at from $3.30 to $3.35 per 100 pounds, in large drums, at works.

CHINA CLAY.—Steadiness prevails in the china clay market. The contract movement is normal and prices are holding to previously quoted levels. Imported china clay is selling at from $15 to $25 per ton, ship side, while domestic paper making clay is selling at from $8 to $13 per ton, at mine.

CHLORINE.—Demand for chlorine is persistent and the position of the local market is sound. Prices are holding to schedule, without difficulty. Chlorine is quoted at 3 cents per pound, in tanks, or multi-unit cars, at works, on standard contracts. The spot quotation ranges from 3¼ cents to 3½ cents per pound.

ROSIN.—The rosin market continues irregular and prices again declined slightly. The grades of gum rosin used in the paper mills are quoted at from $8.45 to $8.55 per 280 pounds, in barrels, on dock. Wood rosin is still selling at from $6.75 to $7.80 per 280 pounds, in barrels, at southern shipping points.

SALT CAKE.—While offerings of salt cake are decidedly limited at present, contract shipments are moving in excellent volume. Prices rule steady to firm. Salt cake is still quoted at from $17 to $21 per ton, while chrome salt cake is offered at from $14 to $15 per ton, in bulk, at works.

SODA ASH.—The soda ash market was rather quiet during the past week. Contract shipments continue to go forward at a steady pace for the season. Prices are generally holding to previous levels. Contract quotations on soda ash, in car lots, at works, are as follows: in bags, $1.32½; and in barrels, $1.55.

STARCH.—No radical changes were reported in the starch market. Supplies are moving into the paper mills in normal volume. Prices are generally being maintained at recently quoted levels. Special paper making starch is quoted at $3.82 per 100 pounds, in bags, and at $3.99 per 100 pounds, in barrels.

SULPHATE OF ALUMINA.—Seasonal conditions prevail in the sulphate of alumina market. Contract shipments are going forward at a steady pace. Prices remain unchanged. Commercial grades are still quoted at from $1.40 to $1.55, in bags, and iron free at from $1.90 to $2.05 per 100 pounds, in barrels, at works.

SULPHUR.—Supplies of sulphur are moving to the paper mills in heavy volume. Prices are steady. Sulphur is quoted at $18 per ton, in lots of 1,000 tons, or over, on yearly contracts, and at $20 per ton for any smaller quantity over that period. On spot and near by car loads, the quotation is $21 per ton.

TALC.—Manufacturers of talc are experiencing a normal demand for their product. Prices are holding to schedule and shading is infrequent. Domestic talc is quoted at from $16 to $18 per ton, in bulk, at eastern mines, while imported talc is offered at from $18 to $20 per ton, in bags, ship side.

# Market Quotations

## Paper

(F. o. b. Mill)

| | | |
|---|---|---|
| Ledgers | 11.00 | @38.00 |
| Bonds | 9.00 | @53.25 |
| **Writings—** | | |
| Extra Superfine | 14.00 | @32.00 |
| Superfine | 14.00 | @32.00 |
| Tub sized | 10.00 | @15.00 |
| Engine sized | 8.00 | @11.00 |
| **Book, Cased—** | | |
| S. & S. C. | 6.00 @ | 7.50 |
| M. F. | 5.75 @ | 7.00 |
| Coated and Enamel | 7.50 | @12.00 |
| Lithograph | 7.50 | @12.00 |
| **Tissues—Per Ream—** | | |
| White No. 1 | .75 @ | 1.00 |
| Anti-Tarnish | 1.35 @ | 1.90 |
| Colored | 1.00 @ | 2.00 |
| White No. 2 | .75 @ | .80 |
| Kraft | 1.00 @ | 1.10 |
| Manila | .75 @ | .80 |
| **Kraft—** | | |
| No. 1 Domestic | 6.25 @ | 6.50 |
| No. 2 Domestic | 5.25 @ | 5.50 |
| Southern | 4.25 @ | 4.50 |
| Imported | 6.50 @ | 7.00 |
| **Manila—** | | |
| No. 1 Jute | 9.00 @ | 9.25 |
| No. 2 Jute | 7.75 @ | 8.50 |
| No. 1 Wood | 4.75 @ | 5.25 |
| No. 2 Wood | 4.00 @ | 4.50 |
| Butchers | 3.75 @ | 4.25 |
| **Fibre Papers—** | | |
| No. 1 Fibre | 5.00 @ | 5.50 |
| No. 2 Fibre | 4.75 @ | 5.25 |
| Common Bogus | 2.75 @ | 3.00 |
| Screenings | 3.00 @ | 3.25 |
| Card Middles | 4.00 @ | 5.00 |
| **Glassine—** | | |
| Bleached, basis 25 lbs. | 13.00 | @16.00 |
| Bleached, basis 20 lbs. | 15.00 | @16.00 |

(Delivered New York)

| | | |
|---|---|---|
| **News, per ton—** | | |
| Rolls, contract | 62.00 | @ — |
| Rolls, spot | 62.00 | @ — |
| Sheets | 67.00 | @ — |
| Side Runs | 47.00 | @52.00 |
| **Boards—per ton—** | | |
| News | 37.30 | @40.00 |
| Straw | 52.50 | @55.00 |
| Chip | 35.00 | @37.50 |
| Binders' Boards | 65.00 | @70.00 |
| Sgl. Mla. Ll. Chip. | 47.50 | @50.00 |
| Wood Pulp | 80.00 | @85.00 |
| 65 Test Jute Liner. | 52.50 | @ — |
| 85 Test Jute Liner. | 55.00 | @ — |

## Mechanical Pulp

(On Dock)

| | | |
|---|---|---|
| **No. 1 Imported—** | | |
| Moist | 28.00 | @31.25 |
| Dry | 32.00 | @34.00 |

(F. o. b. Mill)

| | | |
|---|---|---|
| No. 1 Domestic | 26.00 | @29.00 |
| Screenings | 15.00 | @20.00 |

## Chemical Pulp

(On Dock, Atlantic Ports)

| | | |
|---|---|---|
| **Sulphite (Imported)—** | | |
| Bleached | 3.75 @ | 4.40 |
| Easy Bleaching | 2.90 @ | 3.10 |
| No. 1 strong unbleached | 2.70 @ | 3.00 |
| Mitscherlich unbleached | 2.80 @ | 3.25 |
| No. 2 strong unbleached | 2.40 @ | 2.50 |
| No. 1 Kraft | 2.40 @ | 2.75 |
| No. 2 Kraft | 2.35 @ | 2.50 |
| **Sulphate—** | | |
| Bleached | 3.60 @ | 3.85 |

(F. o. b. Pulp Mill)

| | | |
|---|---|---|
| **Sulphite (Domestic)—** | | |
| Bleached | 3.40 @ | 4.75 |
| Easy Bleaching Sulphite | 2.65 @ | 3.00 |
| News Sulphite | 2.50 @ | 2.70 |
| Mitscherlich | 3.00 @ | 3.25 |
| Kraft (Domestic) | 2.50 @ | 3.30 |
| Soda Bleached | 3.10 @ | 3.25 |
| **Sulphate Screenings—** | | |
| Coarse | .75 @ | .95 |
| Refined | 1.65 @ | 1.85 |

## Domestic Rags

New Rags

(Prices to Mill f. o. b. N. Y.)

| | | |
|---|---|---|
| **Shirt Cuttings—** | | |
| New White, No. 1 | 11.00 | @11.50 |
| New White, No. 2 | 8.00 @ | 8.50 |
| Silesias No. 1 | 7.50 @ | 8.00 |
| New Unbleached | 11.00 | @11.50 |
| New Blue Prints | 5.25 @ | 5.50 |
| New Soft Blacks | 5.25 @ | 5.75 |
| Blue Overall | 7.50 @ | 8.00 |
| Washables | 4.75 @ | 5.25 |
| Fancy | 5.75 @ | 6.25 |
| Mixed Khaki Cuttings | 4.75 @ | 5.25 |
| Pink Corset Cuttings | 8.00 @ | 8.50 |
| O. D. Khaki Cuttings | 5.15 @ | 5.75 |
| Men's Corduroy | 3.75 @ | 4.25 |
| New Mixed Blacks | 3.50 @ | 3.75 |

Old Rags

| | | |
|---|---|---|
| **White, No. 1—** | | |
| Repacked | 5.50 @ | 6.00 |
| Miscellaneous | 4.50 @ | 5.00 |
| **White, No. 2—** | | |
| Repacked | 3.00 @ | 3.50 |
| Miscellaneous | 2.50 @ | 2.75 |
| St. Soiled, White | 2.00 @ | 2.15 |
| **Thirds and Blues—** | | |
| Repacked | 2.25 @ | 2.50 |
| Miscellaneous | 1.75 @ | 2.00 |
| Black Stockings | 3.25 @ | 3.75 |
| **Roofing Rags—** | | |
| Cloth Strippings | 1.70 @ | 1.80 |
| No. 1 | 1.70 @ | 1.80 |
| No. 2 | 1.55 @ | 1.65 |
| No. 3 | 1.30 @ | 1.40 |
| No. 4 | 1.25 @ | 1.35 |
| No. 5A | .90 @ | 1.05 |

## Foreign Rags

New Rags

| | | |
|---|---|---|
| New Dark Cuttings | 2.50 @ | 3.00 |
| New Mixed Cuttings | 2.75 @ | 3.25 |
| New Light Silesias | 7.00 @ | 7.50 |
| Light Flannelettes | 7.50 @ | 8.00 |
| Unbleached Cuttings | 10.00 | @11.00 |
| New White Cuttings | 10.50 | @11.50 |
| New Light Oxfords | 7.00 @ | 7.50 |
| New Light Prints | 5.50 @ | 6.50 |

Old Rags

| | | |
|---|---|---|
| No. 1 White Linens | 7.50 @ | 8.25 |
| No. 2 White Linens | 5.75 @ | 6.75 |
| No. 3 White Linens | 4.75 @ | 5.25 |
| No. 4 White Linens | 3.00 @ | 3.50 |
| No. 1 White Cotton | 5.50 @ | 6.50 |
| No. 2 White Cotton | 4.50 @ | 5.50 |
| No. 3 White Cotton | 3.00 @ | 4.00 |
| No. 4 White Cotton | 1.90 @ | 2.15 |
| Extra Light Prints | 2.75 @ | 3.25 |
| Ord. Light Prints | 2.25 @ | 2.50 |
| Med. Light Prints | 2.00 @ | 2.10 |
| Dutch Blue Cottons | 2.25 @ | 2.40 |
| French Blue Linens | 2.75 @ | 2.85 |
| German Blue Linens | 2.35 @ | 2.55 |
| German Blue Cottons | 2.15 @ | 2.25 |
| Checks and Blues | 1.85 @ | 2.00 |
| Lindsay Garments | 1.85 @ | 1.95 |
| Dark Cottons | 1.60 @ | 1.65 |
| Old Shopperies | 1.55 @ | 1.60 |
| New Shopperies | 1.50 @ | 1.60 |
| French Blues | 2.10 @ | 2.25 |

## Old Rope and Bagging

(Prices to Mill f. o. b. N. Y.)

| | | |
|---|---|---|
| Gunny No. 1— | | |
| Foreign | 1.60 @ | 1.70 |
| Domestic | 1.70 @ | 1.75 |
| Wool Tares, light | 1.60 @ | 1.65 |
| Wool Tares, Heavy | 1.60 @ | 1.70 |
| Bright Bagging | 1.60 @ | 1.70 |
| Small Mixed Rope | 1.25 @ | 1.40 |
| Manila Rope— | | |
| Foreign | 4.25 @ | 4.40 |
| Domestic | 4.75 @ | 5.00 |
| New Burlap Cut | 2.75 @ | 3.00 |
| Hessian Jute Threads— | | |
| Foreign | 3.50 @ | 4.00 |
| Domestic | 3.25 @ | 3.50 |

## Old Waste Papers

(F. o. b. New York)

| | | |
|---|---|---|
| **Shavings—** | | |
| Hard, white, No. 1 | 3.25 @ | 3.50 |
| Hard, white, No. 2 | 2.40 @ | 2.55 |
| Soft, White, No. 1 | 2.50 @ | 2.60 |
| White envelope cuttings | 3.00 @ | 3.50 |
| **Flat Stock—** | | |
| Stitchless | 1.50 @ | 1.60 |
| Overissue Mag. | 1.50 @ | 1.60 |
| Solid Flat Book | 1.40 @ | 1.50 |
| Crumpled No. 1 | 1.00 @ | 1.10 |
| Solid Book Ledger | 2.00 @ | 2.10 |
| Ledger Stock | 1.40 @ | 1.50 |
| New B. B. Chips | .65 @ | .75 |
| **Manilas—** | | |
| New Env. Cut | 2.40 @ | 2.60 |
| New Cuttings | 1.50 @ | 1.75 |
| Extra No. 1 old | 1.25 @ | 1.35 |
| Print | .75 @ | .80 |
| Container | .57½ @ | .60 |
| Bogus Wrapper | .75 @ | .85 |
| Old Kraft Machine Compressed bales | 1.90 @ | 2.00 |
| **News—** | | |
| No. 1 White News | 1.65 @ | 1.75 |
| Strictly Overissue | .75 @ | .80 |
| Strictly Folded | .60 @ | .65 |
| No. 1 Mixed Paper | .42½ @ | 47½ |
| Common Paper | .30 @ | .35 |

WOODPULP
AGENTS

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CLAY
EDGAR
400 Tons Daily
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H. T. BRAND
COATING CLAY
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Edgar Clays are the result of almost half a century of experience in washing Clay. Technical service available for both coating and loading without charge.
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RAGS—BURLAP—BAGGING—ROPE
JUTE BUTTS, MAGAZINES, CATALOGS, OLD PAPERS, THREAD WASTE AND ALL GRADE OF RAGS CUT QUICKLY AND EFFICIENTLY WITH THE
**GIANT** The Standard of the World for 59 Years
Giant Rag Cutters have capacities of from 1 to 5 tons per hour

This is the GIANT 3-B CUTTER WITH A CAPACITY OF 3000 lbs. PER HOUR
TAYLOR, STILES & COMPANY, Riegelsville, N. J., U. S. A.
CANADIAN REPRESENTATIVES Waterous, Limited Brantford, Ont., Canada
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**TANKS**
of every description by your industry's foremost tank builder. Why not call in a specialist?
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Kalamazoo Michigan

"THE FOURDRINIER THAT TOOK THE IRE OUT OF WIRE"
INTERNATIONAL WIRE WORKS
Menasha, Wisconsin

BELLE ALKALI COMPANY, BELLE, W.VA.
LIQUID CHLORIDE **BELLE BRAND** CAUSTIC SODA
Cylinders—Ton Tanks—Tank Cars
76%—Solid Liquid Flake
Arnold, Hoffman & Co. Inc. Sole Agents
PROVIDENCE BOSTON NEW YORK
PHILADELPHIA CHARLOTTE

### Twines
(F. o. b. Mill)

| | | | |
|---|---|---|---|
| Cotton— | | | |
| No. 1 | .39 | @ | .40 |
| No. 2 | .37 | @ | .38 |
| No. 3 | .36 | @ | .37 |
| B. C., 18 basis | .38 | @ | .40 |
| A. B. Italian, 18 basis | .48 | @ | .53 |
| Finished Jute— | | | |
| Dark 18 basis | .24 | @ | .25 |
| Light 18 basis | .27 | @ | .28 |
| Jute Wrapping, 3-6 Ply— | | | |
| No. 1 | .19 | @ | .21 |
| No. 2 | .18 | @ | .20 |
| Tube Rope— | | | |
| 4-ply and larger | .16 | @ | .17 |
| Fine Tube Yarn— | | | |
| 3-ply and larger | .21 | @ | .25 |
| 4-ply | .25 | @ | .29 |
| 3-ply | .28 | @ | .32 |
| Unfinished India— | | | |
| Basis | .13 | @ | .14 |
| Paper Makers Twine | | | |
| Balls | .11 | @ | .12 |
| Box Twine, 2-3 ply | .15 | @ | .17 |
| Jute Rope | .17 | @ | .19 |
| Amer. Hemp, 6 | .29 | @ | .31 |
| Sisal Hay Rope— | | | |
| No. 1 Basis | .16 | @ | .18 |
| No. 2 Basis | .14 | @ | .16 |
| Sisal Lath Yarn— | | | |
| No. 1 | .14 | @ | .16 |
| No. 2 | .12 | @ | .14 |
| Manila Rope | .22 | @ | .24 |

## CHICAGO

### Paper
(F. o. b. Mill)

| | | | |
|---|---|---|---|
| Rag Bond | .30 | @ | .53¼ |
| Water Marked Sulphite Bond | .09 | @ | .12 |
| Sulphite Bond | .06¾ | @ | .11 |
| Superfine writing | .18 | @ | .24 |
| No. 1 fine writing | .14 | @ | .18 |
| No. 2 fine writing | .12 | @ | .14 |
| No. 3 fine writing | .08½ | @ | .12 |
| No. 1 M. F. Book | .06½ | @ | .07¼ |
| No. 2 M. F. Book | .05¼ | @ | .06¼ |
| No. 1 S.&S.C. Book | .06¾ | @ | .07¾ |
| No. 2 S.&S.C. Book | .05¾ | @ | .06½ |
| Coated Book | .07½ | @ | .12 |
| Coated Label | .07½ | @ | .10 |
| No. 1 Manila | .04¾ | @ | .05¾ |
| No. 1 Fibre | .04¾ | @ | .05¼ |
| No. 2 Manila | .04¼ | @ | .04¾ |
| Butcher's Manila | .04 | @ | .04½ |
| No. 1 Kraft | .06¼ | @ | .06½ |
| Southern Kraft | 4.25 | @ | 4.50 |
| No. 2 Kraft | .04 | @ | .04¼ |
| Wood Tag Boards | .04¼ | @ | .06¼ |
| Sulphite Screenings | .03 | @ | .03¾ |
| Manila Tissue— | | | |
| 24x36 Sheet | .07 | @ | .07¼ |
| White Tissue— | | | |
| 20x30 Sheet | .07¼ | @ | .07½ |
| (Delivered Central Territory) | | | |
| News, per ton— | | | |
| Rolls, contract | 62.00 | @ | — |
| Sheets | 67.00 | @ | — |
| Boards, per ton— | | | |
| Plain Chip | 37.50 | @ | 42.50 |
| Solid News | 47.50 | @ | — |
| Solid News | 40.00 | @ | 45.00 |
| Manila Lined Chip | 30.00 | @ | 55.00 |
| Container Lined— | | | |
| 85 Test | 65.00 | @ | 70.00 |
| 100 Test | 70.00 | @ | — |

### Old Papers
(F. o. b. Chicago)

| | | | |
|---|---|---|---|
| Shavings— | | | |
| No. 1 Hard White | 2.20 | @ | 2.25 |
| White Env. Cuttings | 2.40 | @ | 2.50 |
| No. 1 Soft Shavings | 2.00 | @ | 2.10 |
| No. 1 Mixed | .90 | @ | 1.00 |
| No. 2 Mixed | .70 | @ | .75 |
| Ledger & Writings | 1.25 | @ | 1.35 |
| Solid Books | 1.25 | @ | 1.30 |
| Blanks | 1.40 | @ | 1.50 |
| Krafts | 1.60 | @ | 1.75 |
| New Kraft Cuts | 2.15 | @ | 2.25 |
| Manila Envelope Cuttings | 1.65 | @ | 1.75 |
| Ex. No. 1 Manila | 1.30 | @ | 1.45 |
| Print Manila | .75 | @ | .80 |
| Folded News (over-issue) | .80 | @ | .85 |
| Old Newspapers— | | | |
| No. 1 | .65 | @ | .70 |
| No. 2 | .60 | @ | .65 |
| Mixed Papers— | | | |
| No. 1 | .60 | @ | .65 |
| Roofing Stocks— | | | |
| (F. o. b. Chicago, net cash) | | | |
| No. 1 | 30.00 | @ | — |
| No. 2 | 28.00 | @ | — |

## PHILADELPHIA

### Paper
(F. o. b. Mill)

| | | | |
|---|---|---|---|
| Bonds | .06 | @ | .40 |
| Ledgers | .09 | @ | .40 |
| Writings— | | | |
| Superfine | .12½ | @ | .18 |
| Extra fine | .18 | @ | .22 |
| Fine | .17 | @ | .26 |
| Fine, No. 2 | .15 | @ | .25 |
| Fine, No. 3 | .10 | @ | .20 |
| Book, M. F. | .05½ | @ | .07 |
| Book, S. S. & C. | .06 | @ | .07½ |
| Book, Coated | .09½ | @ | .16 |
| Coated Lithograph | .07 | @ | .11 |
| Label | .07 | @ | .11 |
| No. 1 Jute Manila | .08 | @ | .09 |
| Manila Sul., No. 1 | .04 | @ | .05½ |
| Manila No. 2 | .03 | @ | .04 |
| No. 2 Kraft | .06 | @ | .06½ |
| No. 1 Kraft | .06½ | @ | .07 |
| Common Bogus | .03½ | @ | .04 |
| (Delivered Philadelphia) | | | |
| News Print Rolls | 62.00 | @ | — |
| Straw Board | 52.50 | @ | 75.00 |
| News Board | 35.00 | @ | 40.00 |
| Chip Board | 32.00 | @ | 40.00 |
| Wood Pulp Board | 85.00 | @ | 95.00 |
| Binder Boards— | | | |
| No. 1, per ton | 75.00 | | |
| No. 2, per ton | 70.00 | | |
| Carload lots | 68.00 | @ | 70.00 |
| Tarred Felts— | | | |
| Regular | 55.50 | @ | 57.00 |
| Slaters (per roll) | .84 | @ | .94 |
| Best Tarred, 1-ply (per roll) | 1.95 | @ | 2.10 |
| Best Tarred, 2-ply (per roll) | 1.50 | @ | 1.60 |
| Best Tarred, 3-ply | 2.00 | @ | 2.25 |

### Domestic Rags (New)
(Price to Mill, f. o. b. Phila.)

| | | | |
|---|---|---|---|
| Shirt Cuttings— | | | |
| New White, No. 1 | .10½ | @ | .11 |
| New White, No. 2 | .07 | @ | .07½ |
| Light Silesias | .07 | @ | .07½ |
| Silesias, No. 1 | .07 | @ | .09 |
| Black Silesia, soft | .05 | @ | .05½ |
| New Unbleached | .10½ | @ | .11 |
| Washable, No. 1 | .04½ | @ | .05 |
| Blue Overall | .07½ | @ | .08 |
| Cottons—According to grades— | | | |
| Washable, No. 2 | .03 | @ | — |
| New Blue | .03 | @ | .03½ |
| Fancy | .05½ | @ | .06 |
| New Black Soft | .05 | @ | .05¾ |
| New Light Seconds | .02½ | @ | .03 |
| New Dark Seconds | 1.85 | @ | 2.00 |
| Khaki Cuttings— | | | |
| No. 1 O. D. | .05½ | @ | .05¾ |
| No. 2 Mixed | .04½ | @ | .04¾ |
| Corduroy | .03 | @ | .03½ |
| New Canvas | .08½ | @ | .09 |
| New Black Mixed | .03¾ | @ | .04½ |

### Bagging
(F. o. b. Phila.)

| | | | |
|---|---|---|---|
| Gunny, No. 1— | | | |
| Foreign | 1.50 | @ | 1.60 |
| Domestic | 1.75 | @ | — |
| Manila Rope | 3.50 | @ | 4.00 |
| Sisal Rope | 1.50 | @ | — |
| Mixed Rope | 1.10 | @ | 1.25 |
| Scrap Burlaps— | | | |
| No. 1 | 1.50 | @ | 1.60 |
| No. 2 | 1.10 | @ | 1.20 |
| Wool Tares, heavy | 3.00 | @ | — |
| Mixed Strings | 1.15 | @ | 1.25 |
| No. 1, New Light Burlap | 2.50 | @ | 2.75 |
| New Burlap Cuttings | 2.00 | @ | 2.25 |

### Old Papers
(F. o. b. Phila.)

| | | | |
|---|---|---|---|
| Shavings— | | | |
| No. 1 Hard White | 3.20 | @ | 3.25 |
| No. 2 Hard White | 2.75 | @ | 3.00 |
| No. 1 Soft White | 2.80 | @ | 2.90 |
| No. 2 Soft White | 1.80 | @ | 1.90 |
| No. 1 Mixed | 1.50 | @ | 1.60 |
| No. 2 Mixed | .90 | @ | 1.00 |
| Solid Ledger Stock | 1.85 | @ | 1.90 |
| Writing Paper | 1.60 | @ | 1.65 |
| No. 1 Books, heavy | 1.40 | @ | 1.50 |
| No. 2 Books, light | 1.05 | @ | 1.15 |
| No. 1 New Manila | 2.40 | @ | 2.50 |
| No. 1 Old Manila | 1.50 | @ | 1.60 |
| Print Manila | .95 | @ | 1.00 |
| Container Manila | .85 | @ | .90 |
| Old Kraft | 2.25 | @ | 2.50 |
| Common paper | .50 | @ | .55 |
| No. 1 Mixed Paper | .60 | @ | .65 |
| Straw Board, Chip | .60 | @ | .65 |
| Binders Board, Chip | .60 | @ | .65 |
| Overissue News | .80 | @ | .85 |
| Old Newspaper | .50 | @ | .55 |

### Domestic Rags (Old)

| | | | |
|---|---|---|---|
| White, No. 1— | | | |
| Repacked | 4.25 | @ | 4.50 |
| Miscellaneous | 3.50 | @ | 3.75 |
| White, No. 2 | 2.00 | @ | 2.25 |
| Thirds and Blues— | | | |
| Repacked | 2.00 | @ | 2.25 |
| Miscellaneous | 1.60 | @ | 1.80 |
| Black Stockings (Export) | 3.90 | @ | 4.25 |
| Roofing Stock— | | | |
| Foreign No. 1 | 1.65 | @ | 1.75 |
| Repacked | .02½ | @ | .04¼ |
| No. 2 | 1.30 | @ | 1.35 |
| No. 3 (Roofing) | 1.15 | @ | 1.25 |
| No. 4 | 1.00 | @ | 1.15 |
| No. 5A | .75 | @ | .85 |
| B | .65 | @ | .75 |
| C | .65 | @ | .75 |

## BOSTON

### Paper
(F. o. b. Mill)

| | | | |
|---|---|---|---|
| Ledgers— | | | |
| Sulphite | .07½ | @ | .15 |
| Rag content | .15 | @ | .30 |
| All rag | .38 | @ | .52½ |
| Bonds— | | | |
| Sulphite | .06½ | @ | .11½ |
| Rag content | .15 | @ | .30 |
| All rag | .36½ | @ | .65 |
| Writings | .07 | @ | .20 |
| Superfines | .11 | @ | .31 |
| Book, Super | .06 | @ | .09 |
| Book, M. F. | .05¾ | @ | .08½ |
| Book, Coated | .08½ | @ | .20 |
| Coated Litho | .09 | @ | .12 |
| Label | .09½ | @ | .15 |
| Jute Manila No. 1 | .11 | @ | .13 |
| Manila, Sul. No. 1 | .04¾ | @ | .06½ |
| Manila, Sul. No. 2 | .03¾ | @ | .04½ |
| No. 1 Kraft | .06¾ | @ | .06½ |
| No. 2 Kraft | .04½ | @ | .05½ |
| Common Bogus | .02 | @ | .02¾ |
| Delivered New England points | | | |
| News Print Rolls | 61.50 | @ | — |
| Straw Boards, rolls .009 | | | 52.50 |
| Straw Board in Sheets, basis 35s to 70s | 54.50 | @ | 55.00 |
| Filled News Board | 37.50 | @ | 40.00 |
| Chip Board | 35.00 | @ | 37.50 |
| Single Manila Lined Chip | 47.50 | @ | 50.00 |
| Single White, Patent Coated Newsboard | | | |
| Bender | 65.00 | @ | 80.00 |
| Wood Pulp Board | 80.00 | @ | 85.00 |
| Binder Boards | 70.00 | @ | 75.00 |
| (F. o. b. Mill) | | | |
| Tarred Felts— | | | |
| Regular, carload lots | 65.00 | @ | — |

### Old Papers
(F. o. b. Boston)

| | | | |
|---|---|---|---|
| Shavings— | | | |
| No. 1 Hard White | 3.25 | @ | 3.75 |
| No. 2 Hard White | 2.60 | @ | 2.90 |
| No. 1 Soft White | 2.40 | @ | 2.50 |
| No. 1 Mixed | 1.10 | @ | 1.15 |
| No. 2 Mixed | .85 | @ | .90 |
| Solid Ledger Stock | 2.35 | @ | 2.45 |
| No. 1 Books, Heavy | 1.50 | @ | 1.55 |
| No. 1 Books, Light | — | @ | 1.15 |
| Manila Env. Cuttings | 2.00 | @ | 2.25 |
| No. 1 Old Manila | .90 | @ | 1.00 |
| White Blank News | 1.50 | @ | 1.60 |
| Old Kraft | 1.75 | @ | 1.80 |
| Print Manila | .80 | @ | .90 |
| No. 1 Mixed Paper | .40 | @ | .45 |
| Overissue News | .65 | @ | .70 |
| Old Newspapers | .50 | @ | .52½ |
| Box Board, Chip | .55 | @ | .60 |

### Bagging
(F. o. b. Boston)

| | | | |
|---|---|---|---|
| Gunny No. 1— | | | |
| Foreign | 1.50 | @ | 1.75 |
| Manila Rope— | | | |
| Foreign | — | @ | 4.50 |
| Domestic | — | @ | 4.75 |
| Transmission Rope | 2.00 | @ | 2.25 |
| Mixed Strings | 1.25 | @ | — |
| Jute Wool Strings | 1.00 | @ | 1.05 |
| Jute Carpet Threads | 1.00 | @ | 1.10 |
| Scrap Burlaps | 1.37½ | @ | 1.50 |
| Scrap Sisal | 1.87½ | @ | 2.00 |
| Scrap Sisal for shredding | 1.85 | @ | 2.00 |
| Wool Tares, heavy | 1.60 | @ | — |
| New Burlap Cutting | 1.90 | @ | 2.00 |
| Australian Wool Pouches | 3.00 | @ | 3.12½ |

### Domestic Rags (New)
(F. o. b. Boston)

| | | | |
|---|---|---|---|
| Shirt Cuttings— | | | |
| New White No. 1 | .09½ | @ | .10 |
| Silesias, No. 1 | .06 | @ | .06¼ |
| New Unbleached | .10 | @ | .10½ |
| Fancy | .04 | @ | .04½ |
| Washable | .04 | @ | .04½ |
| Cottons—According to grades | | | |
| Blue Overalls | .06¼ | @ | .06¾ |
| New Black, soft | .04 | @ | .04¼ |
| Khaki Cuttings | .04 | @ | .04¼ |
| O. D. Khaki | .05 | @ | — |
| Corduroy | .03 | @ | .03½ |
| New Canvas | .08 | @ | .08½ |

### Domestic Rags (Old)
(F. o. b. Boston)

| | | | |
|---|---|---|---|
| Canvas | .04½ | @ | — |
| White No. 1— | | | |
| Repacked | 4.75 | @ | 5.25 |
| Miscellaneous | 5.00 | @ | — |
| White No. 2— | | | |
| Repacked | .04½ | @ | .05 |
| Miscellaneous | .03½ | @ | .04 |
| Twos and Blues | 2.75 | @ | 3.00 |
| Thirds and Blues— | | | |
| Repacked | 2.50 | @ | — |
| Miscellaneous | 1.75 | @ | 1.90 |
| Black Stockings | — | @ | 4.00 |
| Roofing Stock— | | | |
| No. 1 | 1.65 | @ | 1.75 |
| No. 2 | 1.45 | @ | 1.55 |
| No. 3 | 1.05 | @ | 1.10 |
| No. 4 | 1.10 | @ | 1.15 |

### Foreign Rags
(F. o. b. Boston)

| | | | |
|---|---|---|---|
| Dark Cottons | — | @ | 1.55 |
| New No. 1 Shirt Cuttings | 9.00 | @ | 10.00 |
| Dutch Blues | 2.00 | @ | 2.12½ |
| Lace Curtains | 5.00 | @ | 5.12½ |
| New Checks & Blues | 4.25 | @ | 4.60 |
| Old Fustians | 1.90 | @ | — |
| Old Linsey Garments | 1.85 | @ | 1.90 |

## TORONTO

### Paper
(F. o. b. Mill)

| | | | |
|---|---|---|---|
| Bond— | | | |
| No. 1 Sulphite | .12½ | @ | — |
| No. 2 Sulphite | .10¼ | @ | — |
| No. 1 Colored | .13½ | @ | — |
| No. 2 Colored | .11¼ | @ | — |
| Ledgers (sulphite) | — | @ | — |
| Ledgers, No. 1 | .36 | @ | — |
| Ledgers, No. 2 | .27 | @ | — |
| Writing | .09½ | @ | .10 |
| Book— | | | |
| No. 1 M. F. (carloads) | 7.50 | @ | — |
| No. 2 M. F. (carloads) | 7.25 | @ | — |
| No. 3 M. F. (carloads) | 7.00 | @ | — |
| No. 1 S. C. (carloads) | 8.00 | @ | — |
| No. 2 S. C. (carloads) | 7.75 | @ | — |
| No. 3 S. C. (carloads) | 7.50 | @ | — |
| No. 1 Coated and Litho | 13.25 | @ | — |
| No. 2 Coated and Litho | 12.25 | @ | — |
| No. 3 Coated and Litho | 11.50 | @ | — |
| Coated tinted | 14.50 | @ | — |
| Wrapping— | | | |
| Rag Brown | 4.95 | @ | — |
| White Wrap | 5.25 | @ | — |
| "B" Manila | 5.80 | @ | — |
| No. 1 Manila | 6.65 | @ | — |
| Fiber | 6.65 | @ | — |
| Kraft, M. F. | 7.00 | @ | — |
| M. G. | 7.00 | @ | — |

(Delivered Toronto)

| | | | |
|---|---|---|---|
| News, per ton— | | | |
| Rolls (contract) | 61.50 | @ | 62.00 |
| Sheets | 67.00 | @ | — |

### Pulp
(F. o. b. Mill)

| | | | |
|---|---|---|---|
| Ground Wood | 30.00 | @ | 31.00 |
| Sulphite easy bleaching | 60.00 | @ | — |
| Sulphite news grade | 60.00 | @ | — |
| Sulphite, bleached | 77.00 | @ | — |
| Sulphate | 60.00 | @ | — |

### Old Waste Paper
(In carload lots, f. o. b. Toronto)

| | | | |
|---|---|---|---|
| Shavings— | | | |
| White Env. Cut | 3.00 | @ | — |
| Soft White Book Shavings | 2.85 | @ | — |
| White Blk. News | 1.60 | @ | — |
| Book and Ledger— | | | |
| Flat Magazine and Book Stock (old) | 1.40 | @ | — |
| Light and Crumpled Book Stock | 1.25 | @ | — |
| Ledgers and Writings | 1.50 | @ | — |
| Solid Ledgers | 1.50 | @ | — |
| Manilas— | | | |
| New Manila Cut | 1.50 | @ | — |
| Printed Manilas | 1.00 | @ | — |
| Kraft | 2.25 | @ | — |
| News and Scrap— | | | |
| Strictly Overissue | .85 | @ | — |
| Strictly Folded | .85 | @ | — |
| No. 1 Mixed Paper | .65 | @ | — |

### Domestic Rags
(Price to mills, f. o. b. Toronto)

| | | | |
|---|---|---|---|
| No. 1 White Shirt Cuttings | .10 | @ | .10¼ |
| Fancy Shirt Cuttings | .05½ | @ | — |

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